



A SOUTH VIEW OF ST. JOHN'S HARBOUR, NFL.

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A SOUTH VIEW OF ST. JOHN'S HARBOUR, NFL.

WANDERING THOUGHTS,

OR

SOLITARY HOURS.

By P. TOCQUE.

"My young readers must excuse me for calling upon them to acquire, while their minds may be impressed with new images, a love of innocent pleasures, and an ardour for useful knowledge; to remember that a blighted spring makes a barren year, and that the vernal flowers, however beautiful and gay, are only intended as preparatives for autumnal fruits."—JOHNSON.

LONDON:

THOMAS RICHARDSON AND SON,

172, FLEET STREET; 9, CAPEL STREET, DUBLIN; AND DERRY;

AND ALL BOOKSELLERS IN NEWFOUNDLAND.

M DCCC XLVI.

To His Excellency,

MAJOR GENERAL SIR J. HARVEY, KNT.

COMMANDER OF THE MOST HONOURABLE MILITARY ORDER
OF THE BATH,

KNIGHT,

COMMANDER OF THE ROYAL HANOVERIAN GUELPHIC
ORDER,

GOVERNOR AND COMMANDER-IN-CHIEF IN AND OVER THE
ISLAND OF NEWFOUNDLAND AND ITS DEPENDENCIES,

&c. &c.

"WHOSE NAME IS SO MUCH RESPECTED IN
TRANSATLANTIC BRITAIN,"

THIS WORK

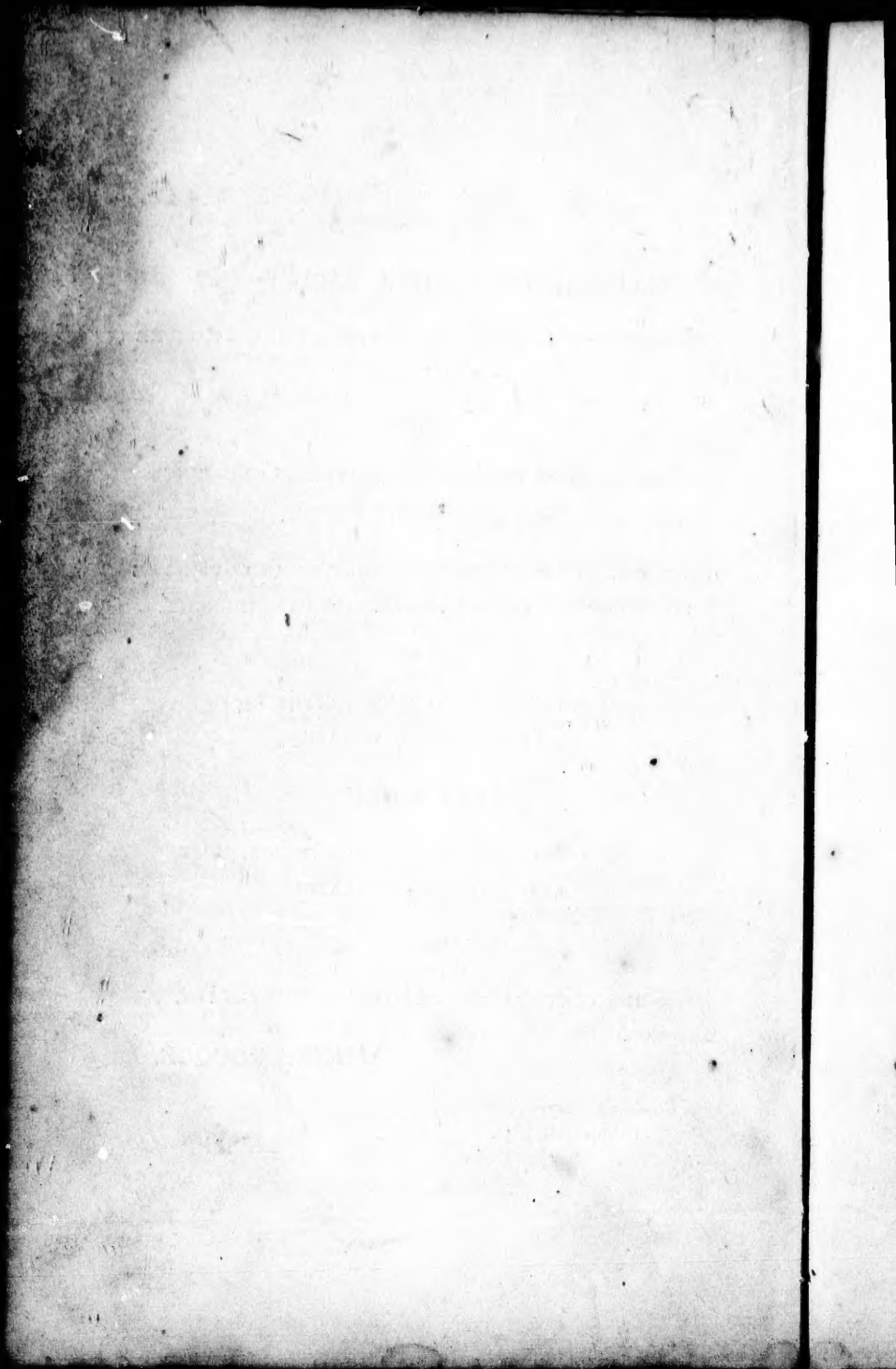
IS, WITH HIS EXCELLENCY'S PERMISSION, MOST
RESPECTFULLY DEDICATED,

BY

HIS VERY FAITHFUL AND OBEDIENT SERVANT,

PHILIP TOCQUE.

*St. John's, Newfoundland,
October 20th, 1844.*



PREFACE.

THE greater part of this small unambitious work was written during a short residence on the northern coast of Newfoundland, where, in comparative solitude, the author spent his leisure hours in composing it.

Part of the materials, as will be seen, have been drawn from authors of the most unquestionable authority, whilst the remainder came under the writer's own personal observation and inquiry. The design of the author in the publication of this little book, is to afford instruction and entertainment to the youth of his native country, Newfoundland, and more especially to those classes whose means of information are somewhat limited, viz. the young fisherman and mechanic. The author makes no pretensions to originality, either in language or sentiment, his object being simply to convey information to the juvenile reader.

To direct the attention of youth to many subjects, which to them may appear novel and invested with interest, but which have become worn thread-bare and unprofitable to the scientific and philosophic reader, ought not to be a censurable undertaking; and should not the success of the author's efforts be equal to the design of the work, the consciousness at least of having exercised his very humble talent with a view to the good of the youth of his country, will be a source of gratification to his own mind.

P. T.

St. John's, Newfoundland,

October 20th, 1844.

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THE PAST.

"Go view when sunset drinks the forest breeze,
Where some grey abbey glimmers through the trees,
And on the turrets evening's pallid rays,
Gleam like the glory of departed days;
How soon the hallowing stillness of the spot
Brings heaven around us till the world's forgot!
Like age-worn sorrow in its dim decay,
When fortune's summer pride has passed away,
Yon freckled pile in shattered greatness wanes,
Where banners hung, and monarchs peal'd their strains.
Sad retrospection draws the moral sigh,
And buried centuries yawn upon the eye."

R. MONTGOMERY.

THE promontory of Cape Bonavista stretches itself about three miles into the waters of the great Western Ocean. It is a perfectly level strip of land, and well adapted for agricultural purposes. Here a lighthouse is being erected by the local government, to shed its ray over the rugged steep. The light is intended to burn at an elevation of 150 feet above the level of the sea, and to revolve at regulated intervals of two minutes, exhibiting alternately a red and white flash. Wandering to the edge of the cliff, I obtained a view of Gull Island, a barren rock, situated a short distance from the shore, and which was lately the scene of

the wreck of the schooner Joseph, which belonged to Mr. George Forward of Carbonear. She was engaged in that dangerous pursuit of the seal fishery a few springs ago, and unfortunately driven in here with the ice, having on board at the time 800 seals. The crew, seeing no chance of her escaping the rocks, abandoned her, leaving on board one man who was ill. They did not, however, leave the vessel without entreating the sick man to accompany them, offering to assist him over the ice, but he thankfully refused to go, preferring to remain where he was, rather than go on the ice to endanger the lives of others as well as his own, as there appeared hardly a probability of his reaching the shore alive, owing to a tremendous sea, and the ice being open. But this poor man sought the favour of God whilst in health, and nothing but the sustaining power of religion resigned him to his fate in this trying hour.

The crew with great difficulty reached the shore in safety, the vessel was seen to strike on the Gull Island thrice, and then passed round the Cape in the ice. She is supposed to have gone as far as the Flowers Point, and there to have sunk, as part of a chain and other articles were picked up there the following summer. Thus perished the *ship*, one of the noblest inventions of man; and thus perished the *man*, the noblest work of God—the one never to assume its form again, the other destined to awake with the slumbering dead, and appear in a more glorious form of existence. The seal fishery is not only a dangerous and hazardous enterprise; it not only

causes the sighing of the widow and orphan, but it is moreover, in too many instances, a sink of iniquity, where every principle of morality is laid prostrate, and the heart shrivelled up to the narrow dimensions of gain. The love of gain is engrafted on the heart of the seal hunter, and this feeling predominates over every other, regardless of the unhallowed means by which it is gratified. The sanctity of the sabbath is disregarded with but few exceptions. How carefully are the vessels insured that are engaged in the seal fishery, which are only the inventions of mechanism, destined to float a short time on the ocean wave; and then sink into annihilation! Not so the immortal spirits who are engaged in this voyage; they will live through the revolving periods of eternity. But, alas! we fear few apply to the Insurance Office of Heaven before they proceed to the perilous and icy ocean.

Every vessel bound to the northern part of Newfoundland must pass Cape Bonavista. While I was standing there, I saw a sail heave in sight, which proved to be Her Majesty's ship Spartan, conveying his Excellency Sir John Harvey on a visit to the northern parts of the island. I watched this vessel until she became lost to my view in the verge of the distant horizon, when I sat myself down to indulge my musings. The quietness of solitude reigned around, save now and then the scream of the sea-fowl, and the hoarse murmuring of the waves as they were dashed to foam beneath my feet, fell upon my ear. I involuntarily exclaimed, And am I now sitting upon the very spot that

John Cabot and his son Sebastian first saw when they discovered this island, on the 24th of June, 1497, under a commission granted by Henry VII. and to which they gave the name of *Terra Primum Vista* (the land first seen), because this was the place that first met their eyes in looking from the sea! The statement that Newfoundland was discovered in the year 1001, by the Norwegians, appears to be nothing but fable. The following is recorded in the "Edinburgh Cabinet Library:"—"The alleged discovery of North America, under the name of Vinland, by the Scandinavians, in the year 1002, is not worthy of credence. The error appears to have been the work of some designing interpolator of the old Icelandic MS. Chronicles." In 1534, the celebrated French navigator Jacques Cartier visited Cape Bonavista, bearing a commission to form a colony; and in 1760, the immortal navigator Capt. James Cook surveyed this beautiful cape. But where are they now, and all the mighty men who figured on the theatre of the world at that period? They have passed away, while the land on which the great navigators then gazed with such inconceivable delight, still sleeps above the storm, with the majestic continuity of inanimate existence. It is true that the names of these celebrated men are written on the annals of Europe; but on the waves of time a voice sounds, "Their glory is shrouded in oblivion for ever." Such, then, is short-lived man. Another generation will come after me, and pass over the same spot, and perhaps indulge in the same train of thought; and then, like

me, disappear from the fleeting scenes of this mortal life.

I now bent my steps towards home. Sauntering along the sea shore, I arrived at two very compact heaps of stones, each about a quarter of a mile long and fifteen yards broad, said to have been placed there by the French, during the time they held possession of the island, for the purpose of curing fish upon them. It is now about 60 years since the French relinquished the right of fishing along this shore. They still, however, retain the right of fishing along the coast from Cape St. John northward, though they are not allowed to make any fortifications, or any permanent erections, nor are they permitted to remain in the island longer than the time necessary to cure their fish. The French carry on an extensive fishery on the western shore. On the small island of St. Pierre a governor resides, as also a small detachment of military.* The resident French population is estimated at about 12,000. From the period of its discovery till the treaty of Paris, in June, 1814, Newfoundland was a scene of contention between the English and French. This was not only on account of her vast impor-

* The quantity of fish exported from St. Peter's by the French, according to a return just published in the "Morning Post," was as follows:—To Guadaloupe and Martinique, two of the French West-India Islands,

In	Quintals.
1840	56,945
1841	71,785
1842	50,549
1843	72,873

tance, as being a nursery for seamen, as well as in consideration of her fisheries, the most abundant in the world; but also on account of her geographical position, being about half way between the old and new world; and situated at the mouth of the St. Lawrence. She is the key of the Canadas, and could command a great part of the continent of America. Newfoundland lies between the latitudes of $46^{\circ} 40'$ and $51^{\circ} 37'$ north, and between the longitudes $52^{\circ} 25'$ and $59^{\circ} 15'$ west, and approaches to a triangular form. The surface of the island comprises an area of 36,000 square miles, which is nearly as large as England, and 9,000 square miles larger than Ireland.

Walking on, I came to several graves, where rest the ashes of a number of Frenchmen. Ah! thought I, what mighty revolutions have arisen and passed away in France since these men were laid in their silent bed; even the great Napoleon, who aspired to be the conqueror of the world, has been conveyed by the conqueror Death to his final home, and his dust, after having been transferred from St. Helena, now reposes almost forgotten in the nation where he was once so proudly hailed by the populace, "Vive l' Empereur!"

"Where are the mighty thunderbolts of war,
The Roman Cæsars, and the Grecian chiefs,
The boast of story? Where the hot-brain'd youth,
Who the tiara at his pleasure tore
From kings of all the then discover'd globe,
And cried, forsooth, because his arm was hamper'd,
And had not room enough to do its work?
Alas! how slim, dishonourably slim,
And cramm'd into a space we blush to name!"

I now arrived at Mock Baggar, the eastern part of Bonavista Harbour, where a peat bog is situated, and from which human skeletons, at various periods, have been dug, and relics of articles known to have been used by the primitive natives of the country, the Red Indians. At what time these bodies were deposited there is unknown. If they belonged to the Boeothicks or aborigines of the country, they must have been there a period of upwards of 200 years. It is well known, however, that human skeletons have been dug out of bogs after remaining there several hundred years. During Cabot's visit to the island he held intercourse with the Red Indians, who were dressed in skins, and painted with red ochre, and who, no doubt, beheld his approach to the shore with as much astonishment as did the inhabitants of the Bahamas when Columbus discovered the West Indies, who supposed the ship in which he crossed the ocean to have moved upon the water with wings, and to have made a noise resembling thunder. He was regarded as an inhabitant of the sun, who had descended to visit them. In like manner, when Captain Cook visited the South-Sea Islanders, upwards of half a century ago, they were struck with terror and astonishment when they saw the ships, flying with their white wings over the ocean, regarding them as either birds or fishes, according as their sails were spread or lowered. This celebrated man at length fell a victim to the uncivilized inhabitants of the southern hemisphere. He was massacred at Owwhyhee, on the 14th February, 1779.

Once the red men sported along the shores of Newfoundland in perfect security, their hunting grounds unintruded upon, and their peace unbroken by their cruel persecutor, the furrier. But as soon as Europeans began to settle in the country, the French and English furriers, perceiving the skin dresses of the Indians, and the rich fur which served them as bedding at night, conceived the diabolical purpose of shooting them for the valuable furs which they always carried with them, and thus commenced a cold-blooded war against these unhappy people, who were thought as little of by these so-called civilized men, as a seal or a bird. The poor Indians were hunted like wolves by those merciless and unfeeling barbarians, the white men, till at last, of all this noble race, at one time a powerful tribe, scarce a trace is left behind. No canoe is now seen gliding noiselessly over the lakes, no war-song breaks upon the ear. If we go to the River Exploits, no sound of the Indian is heard breaking the silence of these gloomy solitudes. If we visit that beautiful sheet of water, Red Indian Lake (their last retreat), no smoke is seen curling from their wigwams, no footstep is traced, all is barrenness and naked desolation. Where then are the red men? They are gone, they have passed away for ever, and are now in the far-off land of the Great Spirit. The philanthropist cannot contemplate the destruction of the aborigines of Newfoundland without dropping a tear for their melancholy and sad destiny.

It is astonishing that such a length of time should have rolled on, and so little effort have been made

for the accomplishment of one of the sublimest objects in which man can be engaged, the civilization of his fellow-man. But a star of hope at last arose in the horizon of this wretched race, whose glimmering, however, was too feeble to pierce the hopeless gloom in which they were enshrouded. The government endeavoured to bring about a reconciliation with them, but it was then too late. The red man lost all confidence, and his heart was steeled against the cruel treachery of the white man. Had the government in the beginning sent a devoted Christian missionary to this degraded race, to charm them with the music of a Saviour's dying love, he would have been the true pioneer in the march of civilization; the hearts of these savages would have been tamed, their ferocity restrained, their passions subdued, and the bow and arrow exchanged for the "olive branch of peace." The preaching of the Gospel must precede the civilization of degraded men. It is a fact which cannot be denied, that to whatever portion of heathen lands the Gospel has been communicated, it has conveyed to the savage bosom a thrill of pleasure before unknown, it has diffused civil and social blessings, while it led to the glories of eternity.

The Boeothicks had some idea of religion, though dark and mixed up with errors and superstition. They believed that they were created by the Great Spirit out of arrows, and that after death they went to a distant country to renew the society of their friends. Thus they believed in those great doctrines of the Christian revelation—the exis-

tence of a God, and the immortality of the soul. Reason never could have discovered this to them, because there is nothing in nature, unaided by revelation, from which these doctrines could be deduced. The ancient Greeks and Romans, with all their learning, eloquence, and refinement, could not discover the soul's immortality. Athens, the seat of Grecian learning and philosophy, worshipped thirty thousand deities. Sunk in ignorance as they were, we cannot suppose that the red men were sufficiently acquainted with the operations of nature in the vegetable kingdom, or the principles of philosophy by which the laws of rest and motion are governed, as to draw any analogy between them and the resurrection of the human body. Therefore the knowledge of a future state must have been communicated to them by a divine revelation. The dealings of Jehovah are frequently dark and mysterious. "The ways of God are in the whirlwind, and his paths are in the great deep; clouds and darkness are round about his throne."

What a world of change! All nature is undergoing a change. The face of things do not long wear the same aspect. The structure of the human body is unceasingly, though insensibly, undergoing a material change; and could we distinctly see all the alterations which are going on in the system, from the lighting of the candle of life, till it is extinguished by the hand of death, we should be amazed at the wonderful revolutions that are constantly taking place in our own bodies.

"Time works upon our frames, and from us steals,
 Even of ourselves unnotic'd, piecemeal scraps:
 No part of man is that which first was born,
 Blood, flesh, or bone, or skin, or hair, or nerve."

Our associations are changing; many of our youthful associates and play-fellows have entered upon the joys or sorrows of eternity. Of those who are alive, some are at home, others are in distant lands; some are enjoying health and affluence, others are suffering poverty, pain, and sorrow.

"Parents I had, but where are they?
 Friends whom I knew, I know no more;
 Companions once that cheer'd my way,
 Have dropped behind, or gone before."

There are times when the mind loves to dwell on the past scenes of life, and reflect upon the happy days of youth; but while sketching the bright picture of the joyous past, the dark future comes in to dash the vision, and the regretful feeling will arise—it is gone—it cannot come again.

"Oh when I was a tiny boy,
 My days and nights were full of joy,
 My mates were blithe and kind!
 No wonder that I sometimes sigh,
 And dash the tear-drop from my eye,
 To cast a look behind!"

In the hour of lonely solitude, and even amidst the busy pursuits of active life, the memory of man calls from their long-forgotten sleep past circumstances and men, and we view with emotions of pleasure by-gone days; but the scene soon changes, and leaves us to think of our present condition.

"Affection still by kind Remembrance led,
 Shall wander in the autumn of the past,
 And seek for days whose loveliness is fled,
 Like leaves which died and vanish'd in the blast."

What numberless revolutions of the wheel of vicissitude! Our circumstances have changed, we are not in the same condition as we were in days that are past; we are either richer or poorer, more happy or more miserable. In the short space of a few fleeting years we often see those who enjoyed affluence and every comfort this world could bestow, surrounded by a host of sycophants and flatterers, suddenly fall from the pinnacle of prosperity into a state of poverty and misery, and during the residue of their lives move through the world unnoticed, unpitied, and forgotten; their former friends hardly deigning to recognize them, and holding out, not the warm hand of friendship, but that of cold formality, the wintry touch of which makes them shrink and sigh. Others we behold as rapidly emerge from the shades of obscurity, and bask in the sunbeams of prosperity; and like undiscovered stars long hid in the immensity of space and just now appearing to view, gather around them a number of observers to describe their greatness and surpassing brightness. What a train of prosperous circumstances follow some! Whatever they embark in is successful; while others, with superior merit and greater abilities, have to contend against a host of obstructions, and to endure a constant succession of disappointments; every enterprise, every plan, however well devised, is unsuccessful. The cause of this lies in one of the unrevealed mysteries of eternity.

What hidden things will a review of the past exhibit to the dying man, who has arrived at the end of life, unprepared for the joys of heaven! The gloom gathers thick around his spirit, and a sting of remorse pierces his heart, when he thinks of the crimes he has perpetrated on the stage and behind the scenes of life; his state is dreary and cheerless, and the horizon of his futurity is enveloped in blackness, gilded by no ray of heavenly light to chase away the gathering storm of God's indignation. What a different review the past affords those who have the lamp of conscience burning brightly! They view with adoring gratitude the goodness of God in providence and grace; and as they look into futurity, the sublime enjoyments of eternity burst upon their view to enlighten their passage over the river of death.

No past event do I remember more distinctly than when passing over the Broad Quay of Bristol one evening in company with an intimate friend. We saw a number of persons assembled on the deck of a vessel; curiosity prompted us to go and see what was going on. We found it to be a prayer meeting, at which we remained until the close, when one of the persons who had been engaged in prayer, approached us, extending his hand and repeating these lines:

"Would Jesus have the sinner die?
Why hangs he then on yonder tree?
What means that strange expiring cry?
Sinners, he prays for you and me."

He invited us to his house, whither we accompanied him; but before we left he summoned his

family, and engaged in prayer for a disobedient son. My companion felt the force of this remarkable prayer, and he informed me some time after, had it not been that Providence directed our steps to the vessel on board of which we were introduced to this pious man, in all probability he would have still been living without a saving knowledge of God. The youth who then accompanied me, is now engaged in the awful, yet delightful employment of making known to his fellow-sinners the mercies of a redeeming God.

One Sunday morning, after hearing two sermons, one in a Wesleyan, the other in a Baptist chapel, I entered Red Cliff church just in time to hear the Rev. Dr. Bridges announce for his text, "The beggar died and was carried by the angels into Abraham's bosom." This venerable man had not proceeded far before the tears began to steal down his furrowed cheeks; the stillness of death pervaded this noble and ancient pile of architecture, which was densely crowded, even the aisle where I stood was thronged; and whatever view I took of this vast assemblage the weeping eye met my gaze. One remarkable passage of the sermon I shall never forget. Whilst this aged minister held the Bible in his withered hand, upon which was falling a copious flood of tears: he said, "When an individual is taken ill and on the borders of eternity, the parson of the parish is sent for; he arrives, he ascends the stairs, he enters the apartment of the dying man; after some conversation he finds that the man has made no preparation for eternity; the minister dares not say, he is going

to heaven, and he must not tell his weeping friends he is on the verge of interminable woe, and must he say? what must he say?" The worthy minister who delivered this very impressive sermon is now in the world of spirits. "And even the servants and ministers of the Lord, even the fathers, where are they? and the prophets, have they lived for ever? or are not they also in the place where the wicked cease from troubling, and where the weary are at rest." Yet a little while and we shall pass away, our bodies will be crushed to atoms in the corruptions of the dark and silent tomb, and our deathless spirits wing their flight to God, to receive their destiny.

"Oh, and is life so brief? and are its ties,
Its hollest ties, so frail and vanishing?
Pass but a few short years, and shall we too
Be missing in our places? Gracious Heaven!
With nobis purpose and eternal hope
Encompass thou our spirits, guide us on
From race to race, from light to purer light,
To the high source of being, till our hearts,
Thirsting for holiness and glory, rise
On wings of faith above this fading scene
Of mortal suffering, and expand in love
Which seeks communion with the realms of God."

How delightful the contemplation, how animating would the prospect be, for us to meet in that happy land,

"Where saints immortal reign,
Infinite day excludes the night,
And pleasures banish pain!"

Let this hope cheer us while we travel through the wilderness, and may our glorious Joshua at last divide Jordan's streams, that we may pass safely over!

THE NIGHT WALK.

"Now Evening fades! her pensive step retires,
And Night leads on the dews, and shadowy hours,
Her awful pomp of planetary fires,
And all her train of visionary powers.

Queen of the solemn thought—mysterious Night!
Whose step is darkness, and whose voice is fear!
Thy shades I welcome with severe delight,
And hail thy hollow gales that sigh so drear!

Thy milder terrors, Night, I frequent woo,
Thy silent lightnings, and thy meteors' glare,
Thy northern fires, bright with ensanguine hue,
That light in heaven's high vault the fervid air."

MRS. RATCLIFFE.

THE moon was shining in her silvery brightness, and the stars glittering in every direction, when we sallied forth to behold the magnificent spectacle of the heavens with bright constellations richly dressed. Amidst the various scenes which beautify the face of nature, there are few more grand or imposing than those which are viewed by the light of the moon. The royal psalmist was deeply impressed with the greatness and glory of God as exhibited in the vast concave of the firmament, when he exclaimed, "When I consider thy heavens, the work of thy fingers, the moon and the stars which thou hast ordained, what is man, that thou art mindful of

him, or the son of man, that thou visitest him!" Several of the poets have given beautiful descriptions of the appearance of moonlight, one of which is the following:

"As when the moon, refulgent lamp of night!
O'er heaven's clear azure sheds her sacred light,
When not a breath disturbs the deep serene,
And not a cloud o'ercasts the solemn scene;
Around her throne the vivid planets roll,
And stars unnumber'd gild the glowing pole;
O'er the dark trees a yellower verdure shed,
And tip with silver ev'ry mountain's head;
Then shine the vales, the rocks in prospect rise;
A flood of glory bursts from all the skies;
The conscious swains, rejoicing in the sight,
Eye the blue vault, and bless the useful light."

POPE'S HOMER.

The moon has been an object of superstitious adoration by the ancients, and in India is still revered as a deity. Among the Jews she was honoured as the greatest of the celestial hosts. We read in the Old Testament that the new moons, or first days of every month, were kept by them as festivals, which were celebrated by the sound of trumpets, entertainments, and sacrifices. The moon is a satellite to our earth, constantly attending upon it at all seasons, and is the nearest of all the heavenly bodies. Her distance from our world is 240,000 miles, 2,180 miles in diameter, 6,300 miles in circumference, and pursuing her course at the rate of 2,300 miles an hour. She revolves around the earth in 27 days, 7 hours, 43 minutes; but as the earth is advancing in her orbit round the sun, during the moon's revolution, the period from one new moon to another is in-

creased, and occupies 29 and a half days. Astronomers inform us that an eclipse of the moon is caused by the shadow of the earth falling on her, which never takes place but at full moon, when the earth is between the sun and the moon, and all three are nearly in a straight line with respect to each other. All the light proceeding from this nocturnal luminary is received from the sun, and reflected back upon us to cheer our long and dreary winter nights, and to assist in producing the ebbing and flowing of our tides, and thus preserving the mighty waters from putrefaction. It is said that the light of the full moon is ninety thousand times less than daylight. If the reflected light of the moon produced heat, the night air would be warm, and consequently destructive to the health of man. The moon not only acts upon the atmosphere, but she is also undoubtedly a mighty agent in producing many geological phenomena, and effecting many extensive changes, which philosophers are as yet wholly ignorant of. The effects of the moon are felt upon the whole of animated nature, from man down to the lowest scale of organization. It is well known that shell fish taken in the decrease of the moon are poor and worthless; whereas, those taken during full moon are plump and good. I have read that animals just killed have been rapidly decomposed by exposure to moonlight, and that in warm countries the moon affects the eyes more than the sun. Of the effects of moonlight upon the human constitution I had a proof last summer. Sleeping in a house at Bonavista where the bed was

situated immediately under a window, the blaze of the full moon poured directly on me, producing such a sickening head-ache and restlessness, that for three nights I took scarcely any rest, and was eventually obliged to have a curtain drawn across the window, in order to screen myself from exposure to the rays of the moon. If we observe the moon with the naked eye, we perceive a dark shadow, so well known by the vulgar epithet of "the man in the moon," which is supposed to be no other than hills and valleys. If we view this shadow through a spy-glass or common telescope, it is more distinctly seen, and presents quite a variegated appearance. We are informed that by the aid of the telescope mountains have been discovered, some of which have been calculated to be five miles in perpendicular height. All astronomers agree, that in the moon there are intelligent beings, pursuing their busy rounds with the changing seasons of that distant orb.

How sublime and beautiful it is to gaze upon the stars in a clear winter's night! The stars have been regarded by men through all the ages of the world with astonishment and admiration. The ancients steered their ships at night by the moon and stars.

"Placed at the helm he sat, and mark'd the skies,
Nor clos'd in sleep his ever watchful eyes.
There view'd the Pleiades, and the northern team,
And great Orion's more refulgent beam,
To which around the axle of the sky,
The Bear revolving, points his golden eye,
Who shines exalted on th' ethereal plain,
Nor bathes his blazing forehead in the main."

POPE'S HOMER.

During our walk to Bonavista, the scenery of nature presented a magnificent appearance; beneath our feet was a snowy carpet of purest white; before us lay the unruffled waters of the ocean like a huge mirror, and over us was stretched the silvery canopy of night, studded with myriads of twinkling stars, while the moon shed a flood of glory over the scene; her silver beams kissing the ocean cheek, she danced on and lit up the distant hills of Bonavista. The evening star too shone very conspicuously; this star is familiar to the most common observer of the starry heavens. It is the planet Venus, and one of the most splendid in the heavens. Her distance from the earth is computed to be 163 millions of miles, her diameter about 7,800 miles, and her rate of motion more than 80,000 miles an hour. Several mountains have been discovered on this planet, from ten to nineteen miles high. This planet is the morning and evening star. "She appears," says Dr. Dick, "like a brilliant lamp amidst the lesser orbs of night, and alternately anticipates the morning dawn, and ushers in the evening twilight. When she is to the westward of the sun in winter, she cheers our mornings with her vivid light, and is a prelude to the near approach of the break of day and the rising sun. When she is eastward of that luminary her light bursts upon us after sunset, before any of the other twinkling orbs of heaven make their appearance; and she discharges in some measure the functions of the absent moon.

It is said that the greatest number of stars visible to the naked eye is not more than from

6 to 800, but by the application of the telescope millions burst upon the view. The great astronomer, Herschel, has computed the number of stars to be nearly one hundred millions, and that when his glass was directed to that bright mass of light (stretching across the heavens and called the Milky-Way) he observed in a zone, only two degrees in breadth, fifty thousand stars in the course of a single hour! At another time no less than two hundred and fifty-eight thousand stars passed through the view of his telescope in the course of forty-one minutes! The number of the stars is wonderfully increased by the consideration that each fixed star is a sun, like our own glorious orb of day, and each the centre of a system, around which worlds revolve. Instead, then, of only one sun and one world in the universe, the science of astronomy has discovered to us suns upon suns, systems upon systems, and worlds upon worlds, dispersed through boundless space; and that our world would be no more missed from the countless worlds rolling in ethereal space, than a drop from the mighty ocean, so small a space does it occupy in the universe.

We are informed that the distance of the nearest star from our earth, is at least twenty billions of miles; and that a cannon ball flying at the rate of 500 miles every hour, would require four millions five hundred and ninety-five thousand years, before it could arrive at the nearest of the fixed stars! The mind is overpowered in the contemplation of such amazing distance. Yet these inconceivable distances are calculated to

exactness by astronomers, according to the rules of geometry and plane trigonometry, and the principles of optics.

"I launch into the trackless deeps of space,
Where burning round ten thousand suns appear,
Of elder beams which ask no leave to shine
Of our terrestrial star, nor borrow light
From the proud regent of our scanty day.
Sons of the morning! first-born of creation!
And only less than Him who marks their track,
And guides their fiery wheels. Here must I stop—
Or is there aught beyond? What hand unseen
Impels me onward through the glowing orbs
Of habitable nature far remote,
To the dread confines of eternal night;
To solitudes of vast unpeopled space,
The deserts of creation wide and wild;
Where embryo systems and unkindled suns
Sleep in the womb of chaos? Fancy droops!
And thought, astonish'd, stops her bold career."

MRS. BARBAULD.

We are inspired with reverential awe in the contemplation of so great a Being who created, sustains, and directs the revolving worlds which astronomy has opened to our view. We are lost in astonishment when we think of the planetary orbs being inhabited. Dr. Chalmers says, "Why then suppose that this little spot, little at least in the immensity which surrounds it, should be the exclusive abode of life and of intelligence? What reason to think that those mightier globes which roll in other parts of creation, and which we have discovered to be worlds in magnitude, are not also worlds in use and in dignity? Why should we think that the great Architect of nature, supreme in wisdom as he is in power, would call these stately mansions into existence, and leave

them unoccupied? When we cast our eye over the broad sea, and look at the country on the other side, we see nothing but the blue land stretching obscurely over the distant horizon. We are too far away to perceive the richness of its scenery, or to hear the sound of its population. Why not extend this principle to the still more distant parts of the universe? What though, from this remote point of observation, we can see nothing but the naked roundness of yon planetary orbs? Are we therefore to say, that they are so many vast and unpeopled solitudes? that desolation reigns in every part of the universe but ours? that the whole energy of the divine attributes is expended on one insignificant corner of these mighty works? and that to this earth alone belongs the bloom of vegetation, or the blessedness of life, or the dignity of rational and immortal existence?

"But this is not all. We have something more than the mere magnitude of the planets to allege, in favour of the idea that they are inhabited. We know that this earth turns round upon itself; and we observe that all those celestial bodies which are accessible to such an observation, have the same movement. We know that the earth performs a yearly revolution round the sun; and we can detect in all the planets which compose our system, a revolution of the same kind, and under the same circumstances. They have the same succession of day and night. They have the same agreeable vicissitude of the seasons. To them light and darkness succeed each other;

and the gaiety of summer is followed by the dreariness of winter. To each of them the heavens present as varied and magnificent a spectacle; and this earth, the encompassing of which would require the labour of years from one of its puny inhabitants, is but one of the lesser lights which sparkle in their firmament."

It lends a delightful confirmation to the argument, when, from the growing perfection of our instruments, we can discover a new point of resemblance between our earth and the other bodies of the planetary system.

It is now ascertained not merely that all of them have their day and night, and that all of them have their vicissitudes of seasons, and that some of them have their moons to rule their night and alleviate the darkness of it; we can see of one that its surface rises into inequalities, that it swells into mountains, and stretches into valleys. Of another, that it is surrounded by an atmosphere which may support the respiration of animals. Of a third, that clouds are formed and suspended over it, which may minister to it all the bloom and luxuriance of vegetation. And of a fourth, that a white colour spreads over its northern regions, as its winter advances, and that on the approach of summer this whiteness is dissipated, giving room to suppose, that the element of water abounds in it; that it rises by evaporation into its atmosphere; that it freezes upon the application of cold; that it is precipitated in the form of snow; that it covers the ground with a fleecy mantle, which melts away from the

heat of a more vertical sun; and that other worlds bear a resemblance to our own, in the same yearly round of beneficent and interesting changes.

We are naturally led to ask in our own minds, What are the modes of existence of the inhabitants of the other worlds? Are they of a higher or lower order of intelligences than we? Are they spiritual or material beings? Are their shape and form like ours, or different? Are they living in a state of innocence, or sin? Are they governed by a code of moral laws like us? Do they partake of the benefits of the death of Christ, and sing the song of redemption? Or are they as our first parents were in the garden of Eden, living in spotless innocence, and holding constant intercourse with God?

To all these inquiries, no astronomer has as yet been able to give any satisfactory reply. All is hid in mystery, which the curiosity of the human mind will never be able to reveal.

That the planets are inhabited we may in some measure be led to infer from a survey of creation. If we examine the works of God, as displayed in the mineral, the vegetable, and the animal kingdoms of nature, we see a chain of gradation extending through the whole, the links of which rise one above the other, till we arrive at man. Does this chain of gradation stop here? or are the links still extended to other orders of created beings? There is a wide space between man and his Creator; whereas, the distance between man and the other animals is very small. If then the

chain of being rises by such a gradual progress, from the lowest order to man, it is reasonable to suppose that it still proceeds, filling up the space between man and the Deity with different orders of intellectual beings. Addison says, "The whole chasm of nature, from a plant to a man, is filled up with divers kinds of creatures, rising one over another, by such a gentle and easy ascent, that the little transitions and deviations from one species to another are almost insensible. This intermediate space is so well husbanded and managed, that there is scarcely a degree of perception, which does not appear in some one part of the world of life. Now if the scale of being rises by such a regular progress so high as man, we may, by a parity of reason, suppose that it still proceeds gradually through those beings which are of a superior nature to him; leaving still, however, an infinite gap or chasm between the highest created being, and the power which produced him."

"So far as we are able to trace the works of God," says Brunton, "we remark in them a gradation leading up from the lowest order to man—the mineral by slow degrees approaches to the plant—the plant by shades still more imperceptible, touches the confines of animal life—the animals in many a various degree possess the faculties of strength, activity, and intellect—until, at last, we arrive at man, in whom shine still the traces of his Maker's image. But, alas! how faint are those traces become—how infinite the distance which divides him now from the Creator! When

we look, therefore, on the one hand, to the narrow bound which separates man from the other works of God—inhabitants like himself of this world—and, on the other, to the awful chasm that presents itself between him and the great Creator; the analogy of providence leads us to suppose, that in this interval beings will be found of intelligence and endowments more valuable far than ours, though removed still at a distance, which created beings cannot pass, from the glory of the eternal God."

Whilst we were gazing and conversing on the stupendous picture of the firmament, and contemplating the greatness and goodness of the all-creating God, the whole hemisphere became brilliantly illuminated, painted with the most beautiful colours we ever beheld by the "rosy fingers" of the Aurora Borealis.

"High quiv'ring in the air, as shadows fly,
The northern lights adorn the azure sky;
Dimm'd by superior blaze the stars retire,
And heaven's vast concave gleams with sportive fire."

Vast columns of purple, pink, green, orange, red, &c. (all of which were as imperceptibly blended as in the rainbow) sported about the heavens, sometimes radiating, sometimes streaming, and then resembling swelling waves. This magnificent display lasted for about ten minutes, and then nearly disappeared, when another part sent forth a more beautiful appearance; all the light, collecting in the zenith, sent forth rays of diversified colours, having the appearance of the opening and shutting of a fan. After assuming various

and fantastic shapes, all gradually died away. As none of us had ever before seen a coloured Aurora, we observed it very attentively, but could not detect the slightest sound, though I have been informed by several individuals at Carbonear, and of undoubted veracity, that whilst prosecuting the fishery at the Labrador during the summer season, they have heard a very distinct sound accompanying the Aurora, resembling the distant flapping of a boat's sails in the wind. It is stated in the "Edinburgh Cabinet Library" that during Hearn's journey to the Arctic Sea, "these northern meteors were distinctly heard to make a rushing and crackling noise, like the waving of a large flag in a fresh gale of wind." At Western Bay, in Conception Bay, a few years since, a crimson-coloured Aurora appeared just before the time of commencing the seal fishery; the colour was reflected from the surface of the snow beneath, which had the appearance of blood. Several of the inhabitants were terrified at its presence, supposing it to be the harbinger of some direful calamity; a few individuals declined prosecuting their intended voyage to the seal fishery, appalled at the streaming glories of this splendid phenomenon.

It is said the northern lights are the origin of the battles seen in the air, which various historians record as having been seen by the ancients, and which were regarded by them with superstitious awe and terror. Various opinions have been given by philosophers as to the origin of the Aurora Borealis. Some suppose it is caused by

a combination of different gases in a peculiar state of the atmosphere; others that it is produced by crystals of frozen vapour or snow in the upper regions of the air; but the commonly-received opinion is, that it is caused by electricity or magnetism; for it has been observed, that during a bright display of the northern lights, the magnetic needle has been considerably disturbed. From observations made by Captain Winn, he found that the Aurora Borealis is constantly succeeded by hard southerly or south-west winds, attended with hazy weather and small rain; that in twenty-three instances he found a gale generally commenced between twenty-four and thirty hours after the Aurora. He is of opinion, that the strength of the succeeding gale is proportionate to the splendour and vivacity of the Aurora.

In a paper communicated to the Royal Astronomical Society of London, Robert Snow, Esq. records his observations of this interesting phenomenon made at Ashurst and Dulwich, from the autumn of the year 1834 to the autumn of 1839, within which period several remarkable Auroras appeared. The author deduces from his observations the following invariable circumstances of the phenomenon. That the Aurora may be expected at any season of the year; that it assumes nearly every variety of colour; that it resembles, both in shape and motion, every variety of ordinary cloud; that its appearances are in the course of the same evening, and without any determinate order, undulating, radiating, and streaming with other capricious forms not easily expressible; that the

length of time during which it is visible is very uncertain; that it appears to the eye (geometrical considerations apart) as if it existed at various distances from the earth's surface; that although for the most part it is not influenced by the presence of clouds, it occasionally tinges them with its own prevailing colours; that this has been noticed only when the clouds are low; that there are also certain lofty cirrus clouds which have the appearance of arranging themselves in peculiar bands of strata, as if in connexion with the Aurora; that these strata are visible during daylight, when the visibility of the dark portion of the arch has sometimes been strongly suspected; that the stars are seen both well and ill defined through the auroral darkness; that it is by no means confined to the northern regions of the sky, though originating about the magnetic north; that, with the exception of a diminution of its general effect, it is uninfluenced by moonlight; that its appearance generally accompanies weather the reverse to frost, such as heavy wind and rain; and lastly, that it is wholly inaudible. The author concludes by warning the spectators of this phenomenon against the false impressions to which the senses are liable, especially with regard to the sensation of heat and the notion of sound as attending phenomena in which our idea of either of these qualities has been predominantly awakened.

We arrived at Bonavista about nine o'clock, where, after remaining a short time, we returned home again to Bird Island Cove. During our walk back, we observed a star shoot across the

heavens, emitting fiery sparks similar to a sky-rocket, and it then disappeared. Various causes have been assigned for the appearance of these meteors. Some attribute their origin to electricity, or the igniting of a quantity of hydrogen gas in the atmosphere. That great philosopher, Sir Humphrey Davy, attributes their appearance to falling stones; but the true cause and nature of falling stars appears to be as yet not fully ascertained. Their height has been calculated at 500 miles, and their velocity thirty-six miles in a second.

A very remarkable phenomenon was observed on the 14th of April, 1843, by Mr. William Parsons of Harbour Grace, and his crew, whilst prosecuting a sealing voyage, the account of which we copy from the "Weekly Herald."

On the evening of Good Friday (14th inst.) Baccalieu bearing W. by S. by compass, distant between 30 and 40 miles, the wind blowing a stiff breeze from W. N. W. the sky being very clear, and the full moon from 10 to 15 degrees above the horizon, and partially obscured by a small cloud, we observed a large ball of fire slowly issuing from behind the cloud, of a diameter equaling apparently four times that of the moon itself, of a bright flame colour, and producing for the space of a minute a light almost equal to the light of day. After moving in a southerly direction for 40 or 50 seconds, it made a curvature towards the sea, and having reached the surface dashed into a thousand luminous fragments, which were immediately extinguished, leaving us in comparative darkness. The eye being directed to

the point of the heavens in which it appeared to originate, our astonishment was increased on beholding another globe of a less size and of a paler hue proceeding from the same place, taking a similar round range and curvature, and ultimately falling, so far as we could judge, on the very spot whereon the former one was extinguished. There was no sound of explosion, nor any other effect that we could perceive."

There is no doubt but that the above appearances were what is termed *meteoric stones*, and must have been bodies of immense size. Mrs. Somerville says, "The fall of meteoric stones is much more frequent than is generally believed. Hardly a year passes without some known instances occurring; and if it be considered that only a small part of the earth is inhabited, it may be presumed that numbers fall into the ocean, or on the uninhabited part of the land, unseen by man. They are sometimes of great magnitude; the volume of several has exceeded that of a body of seventy miles in diameter. One, which passed within twenty-five miles of us, was estimated to weigh about 600,000 tons, and to move with a velocity of about twenty miles in a second. A fragment of it alone reached the earth. The obliquity of the descent of meteorites, the peculiar substances they are composed of, and the explosion accompanying their fall, show that they are foreign to our system."

I have read accounts of meteoric phenomena in the following works: Dick's "Celestial Scenery," the "London Encyclopedia," "Pandelodium,"

"Penny Cyclopedia," Dick's "Sidereal Heavens," the "Encyclopedia Britannica," and several other minor works. For the information of the youthful reader, who may not have had access to any of the above works, I abridge the following accounts from Dick's "Sidereal Heavens" and "Celestial Scenery."

"The most striking and remarkable form in which shooting stars have appeared is that of "meteoric showers," when thousands of those bodies have appeared to sweep along at once, and in continued succession for several hours, so that almost the whole visible canopy of the sky seemed to be in a blaze. As this phenomenon has recently excited considerable attention among philosophers, and as it is now generally considered as connected with some moving bodies in the heavens, I shall, in the first place, give a detail of some of the more remarkable circumstances with which it has been attended, as described by those who were eye-witnesses of the scene. One of the most remarkable displays of the phenomenon to which we allude is that which was seen on the evening of the 12th and the morning of the 13th of November, 1833, in the United States of America. The following account of it is abridged from the New York Commercial Advertiser, of November 13, 1833:

"The sky was remarkably clear on the night of this remarkable phenomenon. Some time before twelve o'clock, the meteors so frequently seen on summer evenings, called *shooting stars*, were observed to fall with unusual frequency and splen-

dour. They continued from that hour to flash athwart the skies more and more, until they were eclipsed by the glories of the rising sun. This morning, from four to six they were most numerous and refulgent. Within the scope that the eye could contain, more than twenty could be seen at a time, shooting (save upward) in every direction. Not a cloud obscured the broad expanse, and millions of meteors sped their way across it on every point of the compass. Were it possible to enumerate them in the swiftness of their arrowy haste, we might venture to say that for the space of two hours, intervening between four and six, more than a thousand per minute might have been counted. Their coruscations were bright, gleamy, and incessant, and they fell thick as the flakes in the early snows of December. In one instance we distinctly heard the explosion of a meteor that shot across to the north-west, leaving a broad and luminous track; and witnessed another which left a path of light that was clearly discernible for more than ten minutes after the ball, if such it was, had exploded. Its length was gradually shortened, widening in the centre, and apparently consisted of separate and distinct globules of light, drawing around a common centre, glimmering less and less vividly, until they finally faded in the distance. Compared with the splendour of this celestial exhibition, the most brilliant rockets and fireworks of art bore less relation than the twinkling of the most tiny star to the broad glare of the sun. The whole heavens seemed in motion, and never before has it fallen to our lot

to observe a phenomenon so magnificent and sublime."

Various similar accounts of the same phenomenon were given in the Philadelphia, Hartford, Boston, and other newspapers of the same date. A gentleman in South Carolina thus describes the effect of the phenomenon of 1833 upon his negroes:—

"I was suddenly awakened by the most distressing cries that ever fell on my ears. Shrieks of horror and cries of mercy I could hear from most of the negroes on three plantations, amounting in all to about six or eight hundred. While earnestly listening for the cause, I heard a faint voice near the door calling my name. I arose, and taking my sword, stood at the door. At this moment I heard the same voice still beseeching me to rise, and saying, 'Oh, my God! the world is on fire!' I then opened the door, and it is difficult to say, which excited me most—the awfulness of the scene, or the distressed cries of the negroes. Upwards of one hundred lay prostrate on the ground; some speechless, and some uttering the bitterest cries, but most with their hands raised, imploring God to save the world and them. The scene was truly awful; for never did rain fall much thicker than the meteors fell towards the earth—east, west, north, and south, it was the same."

Meteoric phenomena, nearly resembling what has been now described, have occurred at several former periods. It is a circumstance worthy of particular notice, that these meteoric showers have taken place chiefly on the 12th, and 13th of

November, and, hence, they are now distinguished by the name of the November Meteors. Flights of shooting stars, more or less numerous, have been seen in different places, both in Europe and America, at the same period—namely, the 13th of November, in the years 1834, 1835, 1836, and 1837, so that they are now considered as a regular periodical phenomenon.”

In the “American Journal of Science,” for April, 1834, Dr. Olmsted, professor of mathematics and natural philosophy in Yale College, New-Haven, has entered into an elaborate investigation of this subject, in a communication which occupies about forty-two pages. The whole of this paper is well worthy of the attentive perusal of the philosophic inquirer; but the limits to which I am necessarily confined in this chapter, will permit me to state only the general results of the professor’s investigations, all of which appear to be deduced from the phenomena with great acuteness and ingenuity of reasoning. These results are,

1. That the meteors of November 13th had their origin beyond the limits of our atmosphere; for the source of the meteors did not partake of the earth’s motion, which was demonstrable from a variety of circumstances.

2. That the height of the place whence the meteors emanated, above the surface of the earth, was about 2,238 miles. This was ascertained from a comparison of different observations made in different places, and from trigonometrical calculations founded upon them.

3. The meteors fell towards the earth, being

attracted to it by the force of gravity. It seemed unnecessary to assign any other cause, since gravity is adequate to produce the effect.

4. They fell towards the earth in straight lines, and in directions which, within considerable distances, were nearly parallel with each other. The courses are inferred to have been straight lines, because no others could have appeared to spectators in different situations to have described arcs of great circles.

5. They entered the earth's atmosphere with a velocity equal to about four miles per second, or more than ten times greater than the maximum velocity of a cannon ball, and about nineteen times that of sound. This was inferred from the laws of falling bodies.

6. The meteors consisted of combustible matter, and took fire and were consumed in traversing the atmosphere. They were seen glowing with intense light and heat, increasing in size and splendour as they approached the earth. They were seen extinguished in a manner in all respects resembling a combustible body like a sky-rocket, and in the case of the larger, a cloud of luminous vapour was seen as the product of combustion. That they took fire in the atmosphere is inferred from the fact, that they were not luminous in their original situation in space, otherwise the body from which they emanated would have been visible.

7. Some of the larger meteors must have been bodies of great size. Some of them appeared larger than the full moon rising. Such a body

seen at a 110 miles' distance, behaved to have been one mile in diameter; at 55 miles, one-half mile; at 22 miles, one-fifth of a mile; at $5\frac{1}{2}$ miles, one-twentieth of a mile, or 264 feet.

8. The meteors were constituted of light and transparent materials. They were of light materials, otherwise their momentum would have been sufficient to enable them to make their way through the atmosphere, to the surface of the earth. They were transparent bodies, otherwise we cannot conceive how they could have existed together in their original state without being visible by reflected light.

9. The next, and one of the principal subjects of inquiry was, What relations did the body which afforded the meteoric shower sustain to the earth? Was it of the nature of a satellite, that revolves around the earth as its centre of motion? Was it a collection of nebulous matter which the earth encountered in its annual motion? Or was it a comet which chanced at this time to be pursuing its path along with the earth, around their common centre of motion? It could not have been a satellite, because it remained so long stationary with respect to the earth; nor was it a nebula, either stationary or wandering lawlessly through space. Such a collection of matter could not remain stationary within the solar system; and had it been in motion in any other direction than that in which the earth was moving, it would soon have been separated from the earth, since during the eight hours while the meteoric shower lasted, the earth moved in its

orbit through the space of 540,000 miles. The conclusion to which Professor Olmsted arrives, after a due consideration of all circumstances, is the following:—That the meteors of November 13th, consisted of portions of the extreme parts of a nebulous body, which revolves around the sun in an orbit interior to that of the earth, but little inclined to the plane of the ecliptic, having its aphelion near to the earth's path, and having a periodic time of 182 days nearly.

Few things have puzzled philosophers more than to account for large fragments of compact rocks proceeding from regions beyond the clouds, and falling to the earth with great velocity. These stones sometimes fall during a cloudy, and sometimes during a clear and serene atmosphere. They are sometimes accompanied with explosions, and sometimes not. The following statements, selected from respectable authorities, will convey some idea of the phenomena peculiar to these bodies. On the 13th of December, 1795, a stone weighing fifty-six pounds fell near Wold Cottage, in Yorkshire, at three o'clock, p. m. It penetrated through twelve inches of soil and six inches of solid chalk rock, and in burying itself had thrown up an immense quantity of earth to a great distance. As it fell, a number of explosions were heard, as loud as pistols. In the adjacent villages the sounds were heard as of great guns at sea, but at two adjoining villages the sounds were so distinct of something passing through the air to the residence of Mr. Topham, that five or six people came up to see if anything extraordinary had

happened at his house. When the stone was extracted, it was warm, smoked, and smelt very strong of sulphur. The day was mild and hazy, but there was no thunder nor lightning the whole day. No such stones are known in the country, and there is no volcano nearer than Vesuvius or Hecla. The constituent parts of this stone were found exactly the same as those of the stones of Benares, which fell December, 1798.

On the 26th of April, 1803, an extraordinary shower of stones happened at L'Aigle, in Normandy. About one o'clock, the sky being almost serene, a rolling noise like that of thunder was heard, and a fiery globe of uncommon splendour was seen, which moved through the atmosphere with great rapidity. Some moments after, there was heard at L'Aigle, and for thirty leagues round in every direction, a violent explosion, which lasted five or six minutes, after which was heard a dreadful rumbling, like the beating of a drum. In the whole district there was heard a hissing noise, like that of a stone discharged from a sling, and a great many mineral masses, exactly similar to those distinguished by the name of meteor stones, were seen to fall. The largest of these stones weighed seventeen pounds and a half. They all contain silica, magnesia, oxyd of iron, nickel, and sulphur in various proportions. Their specific gravity is about $3\frac{1}{3}$ or $3\frac{1}{2}$ times heavier than water. In 1492, November 7th, a stone of 206 pounds fell at Ensisheim, in Alsace. It is now in the library of Colmar, and has been reduced to 150 lbs. in consequence of the abstrac-

tion of fragments. The famous Gassendi relates, that a stone of a black metallic colour fell on Mount Vaision in Provence, November 29th, 1637. It weighed 54 lbs. and had the size and shape of the human head. Its specific gravity was $3\frac{1}{2}$ times that of water. 1654, March 30th, a small stone fell at Milan, and killed a Franciscan. 1706, June 7th, a stone of 72 lbs. fell at Larissa, in Macedonia; it smelled of sulphur, and was like the scum of iron. 1751, May 26th, two masses of iron, of 71 lbs. and 16 lbs. fell in the district of Agran, the capital of Croatia, the largest of these is now in Vienna. July, 1810, a large ball of fire fell from the clouds at Shahabad, which burned five villages, destroyed the crops, and killed several men and women. 1818, July, 29th, O. S. a stone of 7 lbs. weight fell at the village of Slobadka, in Russia, and penetrated nearly sixteen inches into the ground. It had a brown crust, with metallic spots. 1825, 10th February, a meteoric stone weighing 16 lbs. 7 oz. fell from the air at Nanjemoy, Maryland. It was taken from the ground about half an hour after its fall, was sensibly warm, and had a sulphureous smell.

Several hundreds of instances similar to the above might be produced, of large masses of stones having fallen from the upper regions upon the earth. These stones, although they have not the smallest analogy with any of the mineral substances already known, either of a volcanic or any other nature, have a very peculiar and striking analogy with each other. They have been found

at places very remote from each other, and at very distant periods. The mineralogists who have examined them agree, that they have no resemblance to mineral substances, properly so called, nor have they been described by mineralogical authors. They have, in short, a peculiar aspect, and peculiar characters, which belong to no native rocks or stones with which we are acquainted. They appear to have fallen from various points of the heavens, at all periods, in all seasons of the year, at all hours, both of the day and night, in all countries in the world, on mountains and on plains, and in places the most remote from any volcano. The luminous meteor which generally precedes their fall is carried along in no fixed or invariable direction, and as their descent usually takes place in a calm and serene sky, and frequently in cloudless weather, their origin cannot be traced to the causes which operate in the production of rain, thunder-storms, or tornadoes. From a consideration of these and many other circumstances, it appears highly probable, if not absolutely certain, that these substances proceed from regions far beyond the limits of our globe. That such solid substances in large masses could be generated in the higher regions of the atmosphere is an opinion altogether untenable, and is now generally discarded, even by most of those philosophers who formerly gave it their support. That they have been projected from volcanoes is a hypothesis equally destitute of support. On the supposition that the bursting of a large planet was the origin of the small planets, Vesta, Juno,

Ceres, and Pallas, we may trace a source whence meteoric stones probably originate. When the cohesion of the planet was overcome by the action of the explosive force, a number of little fragments, detached along with the greater masses, would, on account of their smallness, be projected with great velocity, and being thrown beyond the attraction of the greater fragments, might fall towards the earth when Mars happened to be in the remote part of his orbit. When the portions which are thus detached arrive within the sphere of the earth's attraction, they may revolve around that body at different distances, and may fall upon its surface in consequence of a diminution of their centrifugal force; or, being struck by the electric fluid, they may be precipitated upon the earth, and exhibit all those phenomena which usually accompany the descent of meteoric stones. This opinion appears to have been first broached by Sir David Brewster, and is stated and illustrated in the "Edinburgh Encyclopædia," art. *Astronomy*, and in vol. ii. of his edition of "Ferguson's Astronomy." Though not unattended with difficulties, it is perhaps the most plausible hypothesis which has yet been formed, to account for the extraordinary phenomena of heavy substances falling with velocity upon the earth, through the higher regions of the atmosphere.

On this subject I would consider it as premature to hazard any decisive opinion. I have laid the above facts before the reader, that he may be enabled to exercise his own judgment, and form his own conclusion. I have stated them partic-

ularly with this view, that they may afford a subject of investigation and reflection. For all the works and dispensations of the Almighty, both in the physical and moral world, are worthy of our contemplation and research, and may ultimately lead both to important discoveries and to moral instruction. Though "the ways of God" are in many instances "past finding out," yet it is our duty to investigate them in so far as our knowledge and limited powers will permit. For as we are told on the highest authority, that "the works of the Lord are great and marvellous," so it is declared, that "they will be sought out," or investigated, "by all those who have pleasure therein."

THE OCEAN.

"Thou trackless and immeasurable main!
 On thee no record ever lived again
 To meet the hand that writ it; line nor lead
 Hath ever fathom'd thy profoundest deeps,
 Where haply the huge monster swells and sleeps,
 King of his watery limit, who, 'tis said,
 Can move the mighty ocean into storm.—
 Oh! wonderful thou art, great element,
 And fearful in thy spleeny humours bent,
 And lovely in repose: thy summer form
 Is beautiful; and when thy silver waves
 Make music in earth's dark and winding caves,
 I love to wander on thy pebb'l'd beach,
 Marking the sunlight at the evening hour,
 And hearken to the thoughts thy waters teach—
 'Eternity, Eternity, and Power."

BARRY CORNWALL.

IN the Mosaic account of the creation we are informed, that the waters reigned over the formless and chaotic world, and that the "spirit of God moved upon the face of the waters"

"With mighty wings outspread,
 Dove-like, sat brooding on the vast abyss,
 And made it pregnant;"

and in obedience to the command of God, "Let the waters under the heaven be gathered together unto one place, and let the dry land appear,"

order arose out of confusion, light out of darkness, and the earth, emerging out of the waters, became a beauteous residence for man and other animals, adorned with every variety of vegetable life. R. Montgomery thus describes the birth of creation :

"Before the glad stars hymn'd to new-born earth,
Or young creation revell'd in its birth,
Thy Spirit mov'd upon the pregnant deep,
Unchain'd the waveless waters from their sleep;
Bade Time's majestic wings to be unfurl'd,
And out of darkness drew a breathing world."

The body of waters flowing over the surface of the earth was on the third day collected together, when that portion of the world above the level of the sea formed the dry land, the sea occupying a vast plain or valley. It is probable that the bottom of the ocean is similar to the dry land, having valleys as far below its surface, as mountains are in height above the surface of the ground. It has been calculated that the sea occupies nearly three-fourths of the surface of the globe. The destruction of the world by the flood was a mighty effort of the oceans, when in one unbroken swell the waves flowed on encircling the whole earth. And of all the race of man none were left but Noah and his family, who were shut up in the ark, drifting on the waves, and preserved by God until dry land appeared, when Noah went forth from the ark to inhabit the new world.

Of the destruction of the Egyptians passing through the Red Sea, Bishop Heber says,

"Fly, Mizraim, fly! From Edom's coral strand
 Again the prophet stretch'd his dreadful wand:
 With one wild crash the thund'ring waters sweep,
 And all is waves—a dark and lonely deep.
 Yet o'er those lonely waves such murmurs past,
 As mortal wailing swell'd the mighty blast;
 And strange and sad the whispering surges bore
 The groans of Egypt to Arabia's shore."

The waters of Jordan were again divided, and a similar event to that of Moses takes place when Elijah the prophet passes over on dry land to the other side. We read that the prophet Jonah, in the belly of the whale, ploughed the ocean and descended its gloomy caves. Dr. Young beautifully describes it:

"The trembling prophet, then, themselves to save,
 They headlong plunge into the briny wave;
 Down he descends, and booming o'er his head,
 The billows close—he's number'd with the dead.

* * * * *

The whale expands his jaws, enormous size!
 The prophet views the cavern with surprise,
 Measures his monstrous teeth afar descry'd,
 And rolls his wondering eyes from side to side;
 Then takes possession of the spacious seat,
 And sails secure within the dark retreat.
 Now is he pleased the northern blast to hear,
 And hangs on liquid mountains void of fear,
 Or falls immers'd into the deeps below,
 Where the dead silent waters never flow;
 To the foundations of the hills convey'd,
 Dwells in the shelving mountain's dreadful shade;
 Where plummet never reach'd he draws his breath,
 And glides serenely through the paths of death;
 Two wondrous days and nights through coral groves,
 Through labyrinths of rocks and sands he roves:
 When the third morning with its level rays,
 The mountain gilds, and on the billows plays,
 It sees the king of waters rise and pour
 His sacred guest uninjur'd on the shore."

Our Saviour rebuked the stormy ocean, and walked on the watery element. Grahame expresses it thus:

"Loud blew the storm of night; the thwarting surge
Dash'd boiling on the labouring bark; dismay
From face to face reflected, spread around—
When lo! upon a towering wave is seen
The semblance of a foamy wreath upright,
Move onward to the ship. The helmsman starts,
And quits his hold; the voyagers, appall'd,
Shrink from the fancied spirit of the flood;
But when the voice of Jesus, with the storm
Soft mingled, 'It is I, be not afraid,'
Fear fled, and joy lighten'd from eye to eye.
Up he ascends, and from the rolling side
Surveys the tumult of the sea and sky
With transient look severe. The tempest aw'd,
Sinks to a sudden calm; clouds disperse;
The moonbeam trembles on the Face Divine,
Reflected mildly in the unruffled deep."

History informs us of Xerxes, the Persian monarch, that when about to invade Greece, he ordered fetters to be thrown into the sea, to curb its stormy waves. And Canute the Dane, who sat upon the throne of England in the year 1017, was told by a flatterer in his train that the sea would obey him; upon which, sitting down, he commanded the tide not to wet his feet, and having stayed there till the water approached him, he turned to the flatterer and said, "See here! how vain is earthly grandeur, and how weak all human force! God alone is king of the land and of the sea: Him let us worship and adore."

The mighty ocean is a world within itself, containing thousands of hidden objects that the

curiosity of the human mind has never reached. The sea is a stupendous effect of creative skill and wisdom, and holds a prominent place among the sublimer objects of nature. It astonishes every beholder who surveys the vast expanse of its mighty waters, glittering and dancing in the summer sun, then lifting its foaming waves and roaring in the winter storm; the flux and reflux of its tides, governed by the greater or lesser influence of night's pale governess; and the consideration that on its ample bosom the stately ship bears the fortunes of thousands, displays the wonderful adaptation of nature to the wants of man.

The tides are supposed to be produced by the revolution of the earth on its axis, the action of the winds, changes of temperature, inequality of evaporation, and the attraction of the sun and moon. It has been observed, that the current has a tendency towards the west. During Captain Parry's voyage to the polar regions, he noticed the ice, large and small, had at sea a slow but sure motion towards the west, and that this motion was kept up against strong breezes from the west. It is found that the waters of the ocean are higher upon the eastern than upon the western coasts. It is said that the waters of the Red Sea maintain a constant elevation of four or five fathoms above the neighbouring waters of the Mediterranean, at all times of the tide; and that in the Gulf of Mexico and the Caribbean sea, the surface is higher than the surface of the Pacific Ocean on the western coast of America. The ordinary velocity of the tide is calculated to be

about one mile and a half per hour, though in some countries near the shore it runs at the rate of from two to three hundred miles per hour. The tide appears to extend to no great depth below the surface, and the great force of the tide is only felt near a coast. It is not unusual to see currents running close by each other in different directions. This I have frequently observed in Conception Bay; about two miles from the shore the tide was flowing to the west, while another current, about three miles from the shore, was moving to the east. I have often seen the two currents meet, producing a great eddying and agitation of the waters. The greatest tide on the coast of Newfoundland is near St. Shotts, which sets in from the eastward at the rate of four miles per hour. Vessels bound from Canada to Europe are frequently wrecked upon the coast of St. Shotts, in consequence of their not making proper allowance for the force of the current on that coast. No inconvenience, however, is experienced in Newfoundland from the rushing of the tides. The waters generally do not rise or fall more than six or seven feet.

All the water which the rivers supply to the sea is drawn from the ocean by evaporation, and raised imperceptibly into the air, whence it descends in fertilizing showers to water the thirsty earth, and give life to vegetable nature. The change of temperature is less frequent in the ocean than in the atmosphere; the temperature of the sea never exceeds eighty-six degrees. In high latitudes the sea has been found to be colder

in the southern than in the northern hemisphere, and the ice is said to extend farther from the south than from the north pole.

Various navigators have endeavoured to ascertain the depth of the ocean, but for want of proper apparatus have failed. The depth of the sea increases gradually as we leave the shore, but how far it continues to do so is unknown. The bottom of the sea is probably like the land, variegated with hills and valleys. An American paper states, that about three years ago the sea was sounded by lead and line in latitude 57 deg. south, and 85 deg. 7 min. west longitude from Paris, by the officers of the French ship *Venus*, during a voyage of discovery, at a depth of 3,470 yards, or nearly two miles. No bottom was found, the weather was very serene, and it is said that the hauling in of the lead took sixty sailors upwards of two hours. In another place in the Pacific Ocean no bottom was found at the depth of 4,140 yards. During Captain Ross's "Antarctic Expedition," soundings were struck by the plummet at a depth of 2,677 fathoms; in another place the line was veered out more than 4,000 fathoms, and yet with all this scope no bottom could be found. In the former case, when it was found, the lead could not be brought up again to indicate the nature of the ground.

That peculiar bitterish saltness which characterizes sea-water has engaged the attention of the naturalists of every age: some have attributed it to one cause, and some to another. It is supposed, however, to originate from the putrefaction of

those vegetable and animal substances which are known to exist in sea-water. This bitterness does not appear to reach beyond a certain depth. A pint of sea-water has been analyzed, and found to contain $216\frac{1}{2}$ grains, something less than half an ounce, of common salt, eighteen grains and one third of Epsom Salts, eleven grains and a quarter of sulphate of lime, with a very trifling quantity of carbonate of lime, and other substances.* The salt, which is like that in common use (chloride of sodium, or muriate of soda), may be procured by evaporation, either by the action of the sun or by boiling. In warm countries salt is obtained by allowing the sea to overflow fields, where it is left exposed to the influence of the sun. Pan-salt is obtained by boiling sea-water in an iron pan.

Salt is found in most countries, in a solid state, which is termed rock-salt. It is said, the salt mines near Cracow, in Poland, contain more salt than would supply the wants of the whole world for thousands of years. However, the greatest part of the salt that is used is obtained from sea-water. There is very little doubt but that great quantities of rock-salt exist in Newfoundland. On the south side of St. George's Bay, salt springs are found, which of course indicate the existence of rock-salt beneath, which will one day be drawn from its

* The water of the Atlantic Ocean contains, in 500 grains,

Pure matter of water	478.420 grains
Chloride of sodium (common salt)	13.3
Sulphate of soda	2.33
Chloride of calcium	0.995
Chloride of magnesium	4.955

hiding-place and appropriated to the purposes of human life. It is said the saltness of the sea is less towards the poles than near the tropics. Bodies floating upon the sea are more buoyant than in fresh-water, because the sea has a greater specific gravity, *i. e.* salt-water heavier than fresh-water. The saltness of the sea appears to have been co-eval with the creation of the world, and is a wise provision of the Almighty, that the great world of waters, occupying more than two-thirds of the globe, should be thus salted for its own preservation, and for the existence of its great Leviathan to its smallest polypi.

The water in the ocean is of a dark blueish green colour, which is said to arise from the same cause as the blue tint of the sky. The colour of the sky is owing to the rays of light passing through vapour in the atmosphere, and the rays of blue light being the most refrangible, pass through the water in greater quantity, undergoing a great refraction on account of passing through such a mass of water. The colour of the sea near the shore is generally green, but this is owing to the nearness of the bottom, and other local causes. In no country in the world is the sea more transparent than in Newfoundland. Objects can be distinguished lying on the bottom at a great depth. Sailing up the Bristol Channel some years ago, I observed that large spots of green, blue, red, yellow, brown, and almost every variety of colour covered the surface of the water, which I remarked to the captain, who said he never saw the water assume such a singular appearance be-

fore. I have thought these colours were produced by swarms of marine insects, mixed up with earthy substances passing in the water at the time. Various causes are assigned for the discolouration of the oceanic waters; but that which generally contributes to make the different colours, is the hue of the rocks of which the bottom is composed, and the animal and vegetable matter near or upon the surface.

All who frequent the sea are familiar with the sparkling or phosphorescence of its waters. I have frequently in the night dipped a rope overboard, which came up like a string of the most brilliant gems. One of the grandest displays I ever saw of this phenomenon was near the Western Islands, when the whole surface of the sea appeared as if emitting flashes of lightning. It was indeed a magnificent scene to view the waves rolling their fiery crests all around us. I have been informed by the fishermen, that fish caught by them during the night have retained their brightness till daylight. On going into a stage after night, I have often seen it appear as if being on fire, from the luminosity of the cod-heads and other putrid pieces of fish. I was spending an evening at Mr. John Butler's, at Port-de-Grave, in the summer of 1841, when Mr. Butler said, "We shall have a gale of wind from the north-east." As there was no appearance of it at the time, I asked him how he knew. He said, "I saw the light." I inquired, "What light?" Upon which he informed me, that previous to a gale of wind from the north-east, they always

saw a light moving about on the surface of the water. I immediately went out of the house and saw it about five miles distant, in the direction of Kelley's Island. It was a pale light, larger than that seen from a lantern. It was moving very slowly to the westward, on the surface of the water. About a week after this I saw it again, when I remarked to Mr. Butler, that we should have a north-easter. In about ten minutes my prognostication was verified by the whistling of the gale around the house. William Butler informed me that he has seen it approach very near the shore, and suddenly burst out into a mass of awful and most brilliant light. He described it as being about the size of a dwelling house.

It is said that the origin of lights seen on the surface of the water is owing to an innumerable multitude of small luminous insects, sporting in or over the water. If this was the cause of the light I have described, these minute creatures must (like the larger animals) have a pre-sensation of the change of weather, for the light always precedes a gale of north-east wind. It has been observed by men in all ages, that previous to a change of weather, animals are in a certain degree affected, and assume various changes and motions. But if this light were insects, it is strange they should always be seen in the one spot, between Port-de-Grave and Kelley's Island.—The more we look at the great arcana of nature the more are we astonished at its mysterious operations. It is true the taper of science has lit up many

a mystery of the age of darkness and superstition, but, alas! how little do we know of the great temple of nature.

The luminous appearance of the sea has been explained by a diversity of causes. Some have ascribed it to fish-spawn and animalcula connected with the oceanic salts, muriate of soda, and sulphate of magnesia; others to putrefaction and friction: but the most probable cause of the phosphorescence of the sea is supposed to be owing to that grand agent in all the operations of nature, electricity.

The geological agency of the sea is to be seen in every country; in some places extending the line of coast, and in others encroaching upon the land. In the reign of Henry I. the sea converted the estates of Earl Goodwin, in Kent, into that celebrated sandbank which still bears his name; and the English papers tell us that in 1843, a company was formed for the purpose of reclaiming no less than 600,000 acres of land which had formerly been overflowed by the sea; and that this land is to form a new county of England, to be designated the "Victoria County," in honour of her majesty who now sways the British sceptre.

The river Mississippi, in North America, falling into an almost tideless sea, has, during floods, carried to the ocean an immense number of logs, trunks of trees, &c., where it is said they are bound together by a species of cane, and collect mud, forming a belt of uninhabitable country, from fifty to one hundred miles in width. The coast

of Holland was subject to a great inundation in 1421, when twenty-two villages were overflowed, the sea forming a large sheet of water, called Bias Bosch.

It is said that the sea at Cape May, on the north side of Delaware Bay, in the United States, encroaches about nine feet every year; and that the sea carried away a quarter of a mile of land in three years, from Sullivan Island, at the entrance of the harbour of Charlestown, in South Carolina. Numbers of instances might be collected in order to show the geological effects of the ocean.

Some suppose the great banks of Newfoundland were once an island, reduced to their present state by the agency of an earthquake or volcano; others attribute their origin to the great river St. Lawrence.

At Lance Cove, near Bonavista, is a grotto formed by the action of the sea. It is quite a natural curiosity, and very inappropriately termed by the inhabitants "The Dungeon." It is about thirty feet deep and three hundred yards in circumference, situated about a hundred yards from the edge of the cliff. On one side of the bottom of this cave are two channels, each about seven feet wide, arched over with grit stone, into which the old ocean thunders its milky foam. During a heavy sea the sound is deafening, resembling the noise made by the working of the machinery of a large mill. On the other side is a small beach, formed by the action of the waves, on which the earth is constantly foundering from

above. This roofless cavern (for it is all open to the light of day, except the channels at the bottom, and may be called a pit rather than a cavern) must enlarge very fast, owing to the soft material which presents itself to obstruct the progress of the sea.

Amongst the wonders of the ocean, few things have excited greater astonishment than the formation of coral reefs and islands. Geologists at one time supposed that whole islands in the Southern Seas were reared from the bottom of the ocean by the labours of the coral insects. It is now, however, believed that the mass of these islands was upheaved by submarine volcanoes, and that when it approached the surface, it formed a base for the coral insects to commence the construction of their edifices, some of which are said to be from twenty to thirty feet in thickness. When the coral reaches the edge of the water, pieces of shells, sea-weed, and wood accumulate upon it, which gradually form a soil. The manner by which these islands acquire earth, vegetable productions, and animal life, is thus described by Montgomery, in his beautiful poem, "The Pelican Island:"

"Nine times the age of man, that coral reef
Had bleach'd beneath the torrid noon, and borne
The thunder of a thousand hurricanes,
Rais'd by the jealous ocean, to repel
That strange encroachment on his old domain.
His rage was impotent; his wrath fulfill'd
The counsels of eternal Providence,
And 'stablish'd what he strove to overturn:
For every tempest threw fresh wrecks upon it;
Sand from the shoals, exuviae from the deep,

Fragments of shells, dead sloughs, sea-monsters' bones,
 Whales stranded in the shallows, hideous weeds
 Hurl'd out of darkness by th' uprooting surges;
 These, with unutterable relics more,
 Heap'd the rough surface, till the various mass,
 By Nature's chemistry combin'd and purg'd,
 Had buried the bare rock in crumbling mould,
 Not unproductive, but from time to time
 Impregnated with seeds of plants, and rife
 With embryo animals, or torpid forms
 Of reptiles, shrouded in the clefts of trees,
 From distant lands, with branches, foliage, fruit,
 Pluck'd up and wafted hither by the flood.
 Death's spoils, and life's hid treasures, thus enrich'd
 And colonized the soil; no particle
 Of meanest substance but in course was turn'd
 To solid use or noble ornament.
 All seasons were propitious; every wind
 From the hot Siroc to the wet Monsoon,
 Temper'd the crude materials: while heaven's dew
 Fell on the sterile wilderness as sweetly
 As though it were a garden of the Lord;
 Nor fell in vain; each drop had its commission,
 And did its duty, known to Him who sent it."

It had long been imagined, that coral branches were vegetable substances; but it is now an established fact, that coral is produced by very minute insects, classified by naturalists in the order *Vermes Zoophyta*. Coral incrusts the rocks along the shores of Newfoundland. I have frequently seen branch coral brought up from deep water on the anchors of the fishing boats, some of which was full of hollow ramifications, and covered with pores or cells; and some were beautiful tubes, from the size of a pipe stem to that of a walking cane. But the Newfoundland coral (though produced by insects) is not of that class of which the coral islands are formed in the tropical seas.

Among the various phenomena which the ocean

presents are the islands of ice or icebergs, appearing like crystal castles, with their high and glittering pinnacles, towering in solitary grandeur, and from which the most beautiful colours are sometimes reflected by the rays of the sun falling on them. Some of these icebergs are several hundred feet in altitude above the level of the sea, though this is only one-eighth of their height, as it is calculated that seven-eighths are below the surface. One of these immense masses of ice exploded last summer, about a mile from Bird-Island Cove, with a tremendous noise like the rumbling of heavy thunder. Several large brooks or streams of water were flowing over it a long time before it burst. One side of this iceberg was covered with a quantity of earth and small stones. I have been informed by several persons that they have seen large trees embedded in them, which appeared as if torn from the earth by some violent force. It is said many of these icebergs contain rocks and earth frequently exceeding fifty thousand tons. They are, no doubt, agents in the production of many shoals, as wherever they ground and are dissolved, the earth and stones must sink to the bottom, thereby diminishing the depth of water. These islands of ice are supposed to be masses detached by the action of the waves from the vast glaciers descending into valleys terminating in the sea, which are known to abound in Greenland, Spitzbergen, and other high northern latitudes. During Captain Ross's Arctic Expedition, he discovered land from 9,000 to 20,000 feet in height, perfectly covered with eternal snow,

and the glaciers descending from the mountain summit projected many miles into the ocean, and presented a perpendicular face of lofty cliffs. There is no doubt that these icy break-waters are undermined and excavated by the waves, and in proportion as the excavations are enlarged and the snow and ice accumulate above and become heavier, immense masses fall into the sea, whence probably come the icebergs which appear in the spring along the eastern shores of Newfoundland. They are looked upon as dreadful engines of destruction by all mariners. Many vessels engaged in the sealing voyages frequently come in contact with them, when sometimes vessels and crews perish together.

"As when in northern seas, at midnight dark,
An isle of ice encounters some swift bark,
And startling all its wretches from their sleep,
By one cold impulse hurls them to the deep."

In the month of March the field ice passes along the northern and eastern shores of Newfoundland, and sometimes for weeks nothing is to be seen but the glittering surface of the icy ocean, presenting a dreary and desolate aspect. But this floating ice brings with it immense numbers of seals (*Phoca Groenlandica*) and (*Phoca Cristata*; *Leonina of Mohr*.)

The wide expanse of ocean teems with life; a population made up of beings of various habits and of various forms range its gloomy deeps. Here we behold the whale (*Balaena*), the monarch of the deep, ploughing the waves, and lashing, as it were, the ocean into storm. Sometimes they are very

plentiful on the coast of Newfoundland, when they are seen spouting in all directions: the white fluid they eject through the blow-hole is seen at the distance of several miles. It is said that this jet is formed by the air expelled forcibly through the spiracle, acquiring its white colour from minute particles of water previously lodged in the external fissure. Whales swim at the rate of four or five miles an hour: they remain at the surface to breathe about two minutes, during which they blow several times. The whale produces from one to two cubs at a time, which she suckles. It is supposed that the flesh of the whale at one time was eaten by all the nations of Europe. It is now the principal food of the Esquimaux and the inhabitants of Greenland, Hudson's Bay, and other northern regions. A large whale of the pike-headed species (*Balaena Boops*) was picked up last summer, 1842, off Cape St. Francis, by a fishing crew belonging to Conception Bay. Its death was supposed to have been caused by external violence, as a large quantity of extravasated blood was observed about the neck and throat. It measured near 50 feet in length, the fat varying from six inches to a foot in depth, and weighing nearly eight tons. It appears from evidence given by Henry Butler, Esq. before a committee of the House of Assembly, in 1840, that the whale fishery was carried on by the Americans to a great extent in Hermitage Bay, Bay of Despair, and Fortune Bay, during the years 1796, 1797, 1798, and 1799; that during the three first years twelve vessels were employed by them,

manned by fifteen men each; that all of these vessels returned nearly loaded: that they carried on the whale fishery in this part of the country until about the year 1807, when it was discontinued, owing to some dispute arising between Great Britain and the United States: that three years after this a schooner was fitted out by the Americans, and arrived at Burin, but on account of a man-of-war being stationed there, the schooner proceeded to St. Mary's Bay, where she remained until the month of August, and had nearly completed her load when she was taken by a British sloop-of-war, and ordered to St. John's; but the crew being too strong for the prize-master, the schooner shaped her course for America, and arrived in safety at Cape Cod. With this ended the American whale fishery on the western shores of Newfoundland. Mr. Butler stated that a whale fishery commenced in Hermitage Bay under the firm of Peter Lemessuirer and Co., which only continued for four years, when the partnership dissolved; that the natives of Hermitage Bay, having some idea of the fishery, and of saving the oil, began a whale fishery on a very small scale; that a person of the name of M'c Donald had made a large property by it; that the house of Newman and Co., being aware of these proceedings, purchased the premises that had been Peter Lemessuirer and Co.'s and began the whale fishery on a very large scale; that they employed the natives of Hermitage and Fortune Bays, and that Newman and Co. were making a profitable business of it.

This establishment is still continued by Newman and Co. at Harbour Britain. In 1840 an act was passed by the local government, offering £200 bounty to each of the first three vessels landing not less than ten tons of whale oil, or fifteen tons of whale fat or blubber, between the first day of May and the tenth day of November. Encouraged by the bounty afforded by the passing of this act, two vessels were sent from St. John's to the western shore, of about 120 tons each, and manned by nineteen men. One of these vessels was sent by Messrs. C. F. Bennett and Co., the other by Messrs. Job, Brothers and Co. The result of each year's fishery was as follows:—

MESSRS. BENNETT'S WHALER.

	Whales.	Product of oil.
1841	20	24½ tons
1842	8	14
1843	5	8½
1844	6	13

MESSRS. JOB'S WHALER.

	Whales.	Product of oil.
1841	5	13 tons
1842	none	5 black-fish.

The species of whale most plentiful on the coast of Newfoundland is the fin-backed whale (*Balaenoptera Jubartes*), which lives on Capelin, Lance, &c. No less than fifty of these are sometimes seen spouting at one time; during their frolics they sometimes leap above the surface of the water, and descending with the head downwards rear their tails in the air and beat the water with great force. On these occasions fishing boats laying at anchor on the fishing grounds

have frequently been injured by them. Sometimes a host of them will surround a fishing boat, causing great alarm to the crew; the usual remedy resorted to for driving them away is to throw overboard a few buckets of bilge water. The great Greenland whale (*Balaena Mysticetus*) is occasionally seen on the coast. Probably the whole tribe of whales frequenting the Greenland seas sometimes visit the Newfoundland coast. Great numbers of what some call Black-fish, and others Pot-heads, are killed during the month of September along the shores of Newfoundland. They are of the species of whale called *Delphinus Delphis*; the colour of the whole body is a blueish black, except a portion of the belly, which is blueish white; the head is round and blunt, and the blow-hole very large. They are from sixteen to twenty-five feet in length, with a forked tail. The fat is from one to three inches thick, and they each yield from 30 to 100 gallons of oil.

Another monster of the ocean is the shark (*Squalus*). A large basking shark (*Squalus Maximus*) was captured this summer (1843) in a salmon net, at Bonavista. This is considered the largest animal of the shark kind; it is said to be neither voracious nor fierce. This monster of the deep measured 27 feet in length, and 20 feet in circumference; the tail fin was seven feet broad, the mouth was provided with a great number of small teeth, which were conic. On opening the stomach nothing was found but the remains of *fuci* or *algae*: their food is said to consist chiefly of sea plants. The quantity of liver taken from

this animal, filled eleven pork barrels, the product of which was 122 gallons of oil, which was as clear as water, and almost tasteless. Every ebb of the sea lays bare multitudes of organic bodies, whose structure, as well as modes of existence, we may examine. The sea-shore exhibits to our view the sea-urchin (*Echinidae*), the muscle (*Anadonta*), the crab (*Cancer Granulatus*), and the wrinkle (*Bulinus*). Few ever cross the mighty ocean, without beholding fleets of creatures sporting and frisking on its bosom. I remember seeing, some years ago, an immense mass of small creatures sailing along on the surface of the water: the vessel was nearly a whole day passing through them: the sailors caught several, which they called the Portuguese men-of-war (*Physalia*). I was warned not to touch them, as they possessed the singular property of stinging. I have since consulted its natural history, and find that such is the case. Troops of larger animals are also seen gamboling on the crested waves.

"Now to the north from burning Afric's shore,
A troop of porpoises their course explore;
In curling wreaths they gambol on the tide;
Now bound aloft, now down the billow glide;
Their tracks awhile the hoary waves retain
That burn in sparkling trails along the main—
These fleetest coursers of the finny race,
When threat'ning clouds th' ethereal vault deface,
Their route to leeward still sagacious form,
To shun the fury of the approaching storm."

Far away from land we see the stormy petrel (*Procellariidae Pelagica*). I have for hours in the midst of the Atlantic Ocean watched the evolutions of the stormy petrel, skimming along,

sometimes on the tops of, and sometimes between the mountain waves. It seemed to revel in the storm, and never appeared so fresh and lively as when braving the billows. The appearance of the petrel awakens the superstition of the sailor, most sailors believing the appearance of Mother Cary's Chicken to be the harbinger of a storm. Nobody, says the sailor, can tell any thing about them, where they come from, or how they breed; they are night and day in the middle of the ocean. It is a well-known fact that the petrels breed on rocky shores, making their nests in the holes and cavities of the rocks, and in the banks along the sea-shore. It is said they return to feed their young only during the night, with the superabundant oily food from their stomachs. Great numbers of these birds breed on the northern Bird Island, off the mouth of Bird-Island Cove. I saw fourteen young ones which an individual brought from the island in the summer; he kept them in a flour barrel, but they communicated such a rank disagreeable smell, that he was obliged to let them free. Barry Cornwall describes the petrel in the following lines:—

"Up and down! up and down!
 From the base of the wave to the billow's crown,
 And amidst the flashing and feathery foam
 The stormy Petrel finds a home—
 A home, if such a place may be,
 For her who lives on the wide wide sea,
 On the craggy ice, in the frozen air,
 And only seeketh her rocky lair
 To warm her young, and to teach them spring
 At once o'er the waves on their stormy wing!

O'er the deep! O'er the deep!
 Where the whale and the shark, and the sword-fish sleep,
 Outflying the blast and the driving rain,
 The Petrel telleth her tale—in vain;
 For the mariner curseth the warning bird
 Who bringeth him news of the storms unheard.
 Ah! thus does the prophet, of good or ill,
 Meet hate from the creatures he serveth still,
 Yet *he* ne'er falters:—So, Petrel! spring
 Once more o'er the waves on thy stormy wing."

Captain Flinders says, that when on a voyage he saw a stream of stormy petrels, which was from fifty to eighty yards deep, and three hundred yards or more broad: they continued to pass without intermission for a full hour and a half. It has been calculated that this stream of petrels contained no less than one hundred and fifty-one millions and a half.

The ocean is beset with innumerable rocks and shoals, some of which no doubt are yet undiscovered. Many a sad tale is hushed in the ocean wave. If some of the undiscovered shoals could become animated and vocal, they would sing in mournful strains

"Of the ship that sank in the reefy surge,
 And left her fate to the sea-bird's dirge—
 Of the lover that sail'd to meet his bride,
 And his story left to the secret tide—
 Of the father that went on the trustless main,
 And never was met by his child again—
 And the hidden things which the waves conceal,
 And the sea-bird's song alone can reveal."

Some of the principal rocks and shoals along the shores of Newfoundland are the following, which lie at the greatest distance from the main land.

Three and a half miles from Cape Bonavista is a rock called Old Harry, having only 13 feet water over it. From this a reef extends nearly three miles further into the ocean, having several dangerous spots upon it of only 18 feet, and three or four fathoms. The outer edge of this reef is called Young Harry. It is always seen breaking, except when the sea is remarkably serene and smooth. Another dangerous shoal lies about 18 leagues S. E. by E. from Cape Race, called the Virgin Rocks. The true position of these rocks was not known until the year 1829, when one of his Majesty's ships surveyed them. These sunken rocks are in lat. $46^{\circ} 26' 33''$ north—long. $50^{\circ} 56' 35''$ west. They extend in an irregular chain S. W. by W. and N. E. by E. 800 yards, varying from 200 to 300 yards in breadth. The least depth of water is on a white rock in $4\frac{1}{2}$ fathoms, with 5 to $6\frac{1}{2}$ fathoms all around it, the bottom distinctly visible. Towards the extremities of the shoal are several detached rocks of from 7 to 9 fathoms, with deep water between. The bank on which these dangerous rocks are situated, extends E. by N. and W. by S. $4\frac{1}{2}$ miles; its broadest part is about $2\frac{3}{4}$ miles, with soundings from 28 to 30 fathoms.

The ocean has been the scene of many a bloody battle, accompanied with the greatest destruction of human life. One of the most memorable in the history of England was the battle of Trafalgar, in which no less than twenty ships of the enemy were taken. Before this celebrated battle commenced, Nelson gave his last signal—

"England expects every man to do his duty," which will be remembered, as Dr. Southey says, "as long as the language, or even the memory, of England shall endure." This battle took place off Cadiz, on the 21st of October, 1805, when Lord Nelson was killed by a ball fired by a rifle-man from the mizen top of the French ship Redoubtable. Thus died the greatest hero that ever commanded the British fleet.

During the early history of the country, the Newfoundland seas were constantly scoured by vessels of war. The most remarkable occurrences of those days were the following.

In 1696 all the English settlements in the island were destroyed by a French fleet, excepting Carbonear and Bonavista, which defended themselves. During the reign of queen Anne, in 1702, a British squadron arrived in Newfoundland, under the command of Sir John Leake, who took possession of the whole island, and captured no less than twenty-nine sail of the French. In consequence of the island being left in an unprotected state in 1761, it was visited in 1762 by a French fleet, which landed some troops at Bay Bulls, who proceeded over-land to St. John's, where the garrison, being unable to defend themselves, surrendered (his majesty's ship, Gramont, then lying in port), and were made prisoners of war. They also took Carbonear and Trinity, where they committed all sorts of depredations.

Intelligence of this occurrence having been communicated to Lord Colville, at Halifax, he immediately set sail for Newfoundland. On arriving off

the harbour of St. John's, he found a superior French squadron, under the command of Admiral de Ternay, lying within at anchor. Previous to the arrival of Lord Colville, Robert Carter, Esq., of Ferryland, and a Mr. Brookes of Bay Bulls, had consulted together, and deeming it expedient, had at their own expense collected a number of bank-fishing or western boats, cut them down, and metamorphosed them into very tolerable row-galleys, with the greatest expedition. This laudable and spirited conduct met the highest approbation of the noble lord, who, directly taking advantage of this facility afforded for coasting along the surf-beaten shores, manned them with natives, embarked in each as many of the military as they could convey, with provisions, ammunition, &c. constituted Mr. Carter commodore, Mr. Brookes captain of this little squadron, and under cover of the evening shades despatched them to Torbay, where they arrived the ensuing morning. In the mean time a feint was made of landing the body of the troops from Lord Colville's squadron at Quidi Vidi, when a sharp contest ensued. The English fought up the precipice with desperation; but the numbers of the French, and their superior advantage in situation, prevented the English dislodging them from their position, on Signal Hill. Nevertheless, the scheme was complete; the western-boat military, under command of Colonel Amherst, effected a march through the fore t from Torbay, without having been observed, until they reached the rising and more clear ground, about one mile from the French position.

A rapid stream flowed between the armies, and several skirmishes were fought during the frequent attempts made by the English to cross this stream, which at this season was more than usually overflowed; during one of which, Major M^c Kenzie was severely wounded. This disaster clouded the victory which was obtained the following day over the dispirited Frenchmen, who, taking advantage of their fleet in St. John's harbour, embarked with precipitation; and under concealment of the canopy of a thickly spreading bank of fog put to sea, and the English fleet, being driven off to sea in a heavy gale of wind, were unable to pursue them.

In those days Robert Carter, Esq. supported a garrison on a small island called the Isle of Boys, situated near the entrance of the harbour of Ferryland, and Charles Garland, Esq., a detachment of military on Carbonear Island. These individuals were two of the principal inhabitants of the island, and their services on this occasion were highly appreciated by the government.

In 1775 the coast was greatly annoyed by American privateers. In 1796 the French, commanded by Admiral Richery, with nine sail of the line, and some other small vessels of war, burnt the shipping and town of Bay Bulls. A writer, who took part in the proceedings of this period, describes the visit of the French Admiral, in 1796, in a communication to the Newfoundland "Royal Gazette," of June 14th, 1842. The particulars narrated by the writer of this article, are not published in any history of Newfoundland, nor

is there any signature to the communication; yet we cannot doubt the truth of the statements, and therefore lay them before the reader accordingly:

“ 1796.

“The levy of the Royal Newfoundland regiment had been completed the preceding fall; and it was found, that the barracks at Forts Townshend and William were insufficient to contain so many men; it was therefore ordered, that the garrison should go under canvas for a few months, while the old barracks were being repaired and cleansed, and some of the new barracks at Signal Hill finished, and also for the greater facility of practising the officers and men of that young regiment in the indispensable tactics and operations of the field. A camp was accordingly formed on the general parade ground, with a small park of artillery, of which the troops took possession about the middle of June.

“The improved defences of the Narrows being finished, some experiments were tried with heated shot, before his Excellency, Admiral Sir James Wallace, the governor, which gave general satisfaction. A large platform of wood was built on South Point, called the Duke of York's Battery, on which were mounted eight 24-pounder guns, three or four 18-pounder carronades, and two 10-inch mortars. The block-house was so forward, as to admit six guns to be mounted on the second floor. The regiment by this time (the latter part of August) was approaching fast to systematic regularity and discipline, and of

approved internal economy. Such being the state of the garrison and fortifications, together with the efficiency of the volunteer companies, a fine set of men, particularly the company of volunteer artillery, selected from among the flower of the inhabitants of St. John's, as well as the undoubted loyalty of the inhabitants; a wish seemed to be inspired, that something might happen to test the fidelity of the whole. If such was the case, it was not long before that wish was realized; for early in the morning of the first day of September, the signal was made that an enemy's fleet was seen to the southward, which proved to be that of the French admiral Richery, consisting of seven sail of the line, two frigates, and some other small vessels of war. The signal of alarm and defiance was instantly made at Signal Hill and all the forts. There was only the governor's ship and one frigate in port. His Excellency, Admiral Sir James Wallace, a governor of warlike celebrity, immediately proclaimed martial law, and ordered all the men in the town fit for service, merchants, with their domestic and wharf establishments, captains of vessels, with their crews, planters, with their fishermen and shoremen, to muster in front of the camp, where they were enrolled and told off to the forts and batteries, and were not to be dismissed until the governor's pleasure was known. The enemy stood off and on, near Cape Spear, all that day; and during the night the road was opened from Maggotty Cove Bridge, through the inclosures leading to Signal Hill, by direction of the governor, in

order to expedite the transport of ammunition, stores, and provisions, to Signal Hill, as well as the camp equipage, which had been struck in the evening; and by daylight on the morning of the second, the tents were all pitched on the summit of the hill, from the Duke of York's Battery to Cuckold's Head, and also on the south hill, over Fort Amherst. This warlike demonstration, with the display of three or four thousand men on the hill, must have had a very intimidating effect on Monsieur, when viewed from sea. This day passed off, under something like a passive hesitation on the part of the enemy; a great deal of telegraphing and boat communication took place with the flag-ship, and towards evening the fleet stood a little further off to sea. Reconnoitering parties were out, along shore, north and south, day and night, in anticipation of a landing being effected. A great many seamen were employed that day in raising the chain across the Narrows; the great capstan at the south side being assisted by three schooners placed at equal distances from Chain Rock; and by grappling the chain with their anchors, and heaving altogether, they raised it to the surface of the water. These vessels were also charged with combustibles, and were intended to be used as fire-ships on the enemy coming in contact with the chain. The flag-ship and the frigate were also placed at equal distances in the harbour, to give them a warm reception on entering the Narrows. On the first appearance of the enemy, the shot furnaces were kindled. It was found difficult, however, to preserve the proper

degree of heat, and to prevent fusion, which happened to some of the shot. On the 3rd the enemy formed a line, and stood in for the Narrows, when it was expected their intention was to attempt a landing. They stood on till the van-ship was near the extreme range of the guns at Fort Amherst, when she and all of them put about and stood off to sea. They remained in sight for several days, and at last bore away to the southward, and arrived at Bay Bulls, where they landed; and to consummate their dastardly conduct, they drove the poor defenceless inhabitants to the woods;

‘Burnt their stores and houses,
Took their fish and oil,
The hard-earned produce
Of their yearly toil.’

“Thus terminated the great excitement occasioned by the appearance of so formidable a French armament. The detachments at the respective posts were continued till it was ascertained that the French fleet had entirely left the coast.

“During the alarm, there was only one old man, or a small boy, allowed on each merchant’s wharf, vessel, or fishing room; all the rest were stationed at the forts and batteries.”

How dreadful are the horrors of war! It is one of death’s allies; it has for its object the destruction of human life, and is the offspring of sin. The progress of the warrior is marked by desolation and death; and the trophies of honour he acquires are bedewed with tears, and stained with human blood. “From whence come wars and

fightings among you? come they not hence, even of your lusts that war in your members?" James iv. 1. Bishop Porteus has expressed some fine sentiments on this subject in his beautiful poem on Death:

"One murder made a villain;
Millions, a hero. Princes were privileged
 To kill, and numbers sanctified the crime.
 Ah! why will kings forget that they are men?
 And men that they are brethren? Why delight
 In human sacrifice? Why burst the ties
 Of nature, that should knit their souls together
 In one soft bond of amity and love?
 Yet still they breathe destruction, still go on
 Inhumanly ingenious to find out
 New pains for life, new terrors for the grave:
 Artificers of Death! Still monarchs dream
 Of universal empire growing up
 From universal ruin. Blast the design,
 Great God of hosts! nor let thy creatures fall
 Unpitied victims at Ambition's shrine."

The ocean has been a mighty agent in the civilization of the world. It has led to the building of ships, by which means the distant nations of the world have been united and brought near each other. The missionary ship is seen ploughing the ocean, bearing her peaceful cargo to diffuse the blessings of religion to distant lands.

"And now the Gospel, borne on every breeze,
 Speeds o'er the land, and sweeps the rolling seas."

The first regularly built vessel we have any account of was the ark, in which Noah and his family, and also pairs of the different kinds of beasts, fowls, and creeping things, which were to replenish the earth, were preserved from the desolating influence of the deluge. The ark was built

by the command of God, and it occupied Noah 120 years in the building. This was the largest vessel that ever floated on the waters. Allowing a cubit to be a foot and a half, the ark was 450 feet in length, 75 in breadth, and 45 in depth. It contained three stories or decks, each fifteen feet in depth. Her burden was 42,213 tons.

The largest vessel of modern times is the "Great Britain," iron steam-ship, lately built at Bristol. The length of this vessel, from her figure-head to the taffrail, is 320 feet, and breadth 51 feet; the depth of her hold 31 feet. Her draught of water when loaded, is calculated to be 16 feet, and her burden 3500 tons. The force of her engines are equal to that of 1000 horses, which are used to keep in action, as the means of propulsion, an Archimedean screw. But the ark had the capacity or stowage of twelve of such ships as this great Leviathan of the nineteenth century.*

History informs us that the first improvements in ship-building were made by the Phœnicians, and their great success encouraged the Jews also to build ships. We read in the scriptures that King Solomon sent his fleets to distant countries, to collect materials necessary for the erection of the temple. The art of ship-building extended from the Jews to the Greeks and Romans, and so continued gradually to improve until the present day. The number of ships built in Newfoundland at different periods is as follows:—

* This magnificent ship now lies stranded on the beach in Dun-drum Bay, on the eastern coast of Ireland.—Oct. 12, 1846.

	SHIPS.	TONS.
1814	12	813
1837	26	1,170
1838	28	1,652
1839	16	811
1840	31	1,659
1841	33	1,683
1842	32	1,553

The great world of waters was almost unknown until the invention of the mariner's compass, in the beginning of the 12th century. It was then found that a piece of iron rubbed against a loadstone, pointed due north and south. This was shortly after applied to navigation. Two ends of an iron needle being rubbed against a loadstone, and then balanced on a pivot, so as to turn round freely, acquired the singular property of always pointing to the north. This needle being fixed in a round box, with a card marked with 32 points, form the sea compass. The loadstone is sometimes called magnetic iron stone. It is somewhat harder and more heavy than iron ore, and is found in most iron mines. As yet philosophers have not been able to explain the cause of the extraordinary powers of attraction possessed by this stone. The first advantage resulting from the invention of the compass was the discovery of a passage round the south of Africa, by the Portuguese. The next and most important was the discovery of the West Indies, and the continent of South America, by Columbus, in 1492; five years after which Newfoundland was discovered by John Cabot, a Venetian, who gave it the name of Baccalaos, that being the Indian name for cod-fish. In 1501 Newfoundland was visited by the

Portuguese navigator Gasper de Corte Real, who is said to have first landed at Portugal Cove, and who gave to Conception Bay the name that it bears. In 1578 the Portuguese carried on an extensive fishery in Newfoundland, employing no less than fifty vessels.* On the 10th of May, 1534, Jacques Cartier, the French navigator, visited Newfoundland, from whence he coasted along the American continent. In the reign of Queen Elizabeth, Sir Humphrey Gilbert and Sir Walter Raleigh engaged in an expedition to Newfoundland, having five vessels under their command; but the Raleigh, commanded by Sir Walter, was obliged to put back to England, in consequence of an infectious disease breaking out among the crew. Sir Humphrey Gilbert, with the remaining four ships under his command, arrived at St. John's, on the 5th August, 1583; which he took possession of, with all the land within the circumference of 600 miles, in the name of his sovereign, Queen Elizabeth. In August, during the same year, he despatched one of his vessels, the *Swallow*, to England with some of his followers, who wished to return home, after which Sir Humphrey sailed from St. John's, on a voyage of discovery to the westward. During a heavy gale of wind and a thick fog, they fell in upon the land, when the *Delight* went on shore, and out of 116 souls only 14 were saved. A few days after this occurrence the other two vessels bore away for England. During the passage a heavy storm arose,

* A number of Portuguese vessels were employed in the bank fishery in 1844.

in which the Squirrel (commanded by Sir Humphrey) sunk, together with her crew. The Golden Hind, the only remaining vessel of the fleet, arrived in England thirteen days after. These vessels were all small, the largest being 120 tons, two of 50 tons each, and the smallest (the one in which Sir Humphrey was lost) being only 10 tons, and insufficient to weather a heavy gale.

In 1775 Newfoundland was visited by a dreadful storm. The sea rose twenty feet above the usual height, which threw on shore hundreds of craft, both large and small; and it is calculated that three hundred persons perished. The ocean storm is one of the most sublime appearances of nature. Here we can drink to the full the emotion which philosophers designate, "the emotion of moral sublimity." The grandest and most awful scene which I ever witnessed, occurred while crossing the Atlantic, in the midst of a tremendous storm. It was night; over our heads were stretched the sparkling worlds, rolling silently along their courses, and nothing was to be seen beneath and around us, save the wide waste of waters, with mountain-waves curled in foamy wreaths, and roaring in awful majesty; when one of the passengers proposed that we should sing a hymn; he gave out the following lines of that beautiful hymn of Cowper:—

"God moves in a mysterious way,
His wonders to perform;
He plants his footsteps in the sea,
And rides upon the storm."

I had heard this hymn sung before, with the assistance of musical instruments; but the adapta-

tion of the words and sentiments to the scene, produced a peculiarly solemn effect on the mind, not to be derived from the peals of the organ, nor the tones of all the musical instruments in the world combined. The storm has frequently employed the pencil of the painter, and the imagination of the poet. David beautifully describes it: "They that go down to the sea in ships, that do business in the great waters; these see the works of the Lord, and his wonders in the deep, for he commandeth and raiseth the stormy wind, which lifteth up the waves thereof: they mount up to the heavens, they go down again to the depths; their soul is melted because of trouble."

Of what incalculable benefit is the sea to man! Without it trade and commerce could not be carried on. Newfoundland, being an island, is washed on all sides by the sea, by which means thousands are enabled to derive their subsistence from the waters of the ocean. Without the sea we could not send our fish and oil to market, neither could we import bread, flour, pork, butter, sugar, molasses, tea, and the other necessities of life. The estimated value of these articles imported into this colony at different periods was as follows:

1822	£867,752 sterling.
1826	 512,443
1827	 889,261
1830	 768,416
1831	 829,353
1834	 618,757
1836	 579,799
1839	 710,558
1840	 784,045
1841	 800,423
1842	 694,337

The following is the number of vessels arriving at Newfoundland, at different periods, from Great Britain, British Colonies, United States, and other foreign states:

YEARS.	NO.	TONS.
1822	749	81,022
1823	753	84,478
1826	851	93,406
1827	786	90,380
1829	791	91,030
1830	828	94,423
1831	877	96,569
1832	892	95,242
1834	848	108,548
1836	800	98,830
1839	861	91,661
1840	1005	112,181
1841	964	114,200
1842	1043	118,679

Taking into account the number of vessels engaged in the fisheries, it is estimated that Newfoundland annually employs fifteen hundred sail of vessels. According to the last census, in 1836, the number of fishing-boats, from 15 to 30 quintals, throughout the island, were 6,388. Besides this number there were probably about as many more of smaller size. The number of fishermen employed in these boats cannot be less than 40,000. Besides this an extensive Labrador fishery is carried on from the ports of St. John's, Harbour Grace, Carbonear, and Brigus, which probably employs 10,000 persons.

How refreshing to the spirits to walk along the sea-shore, and inhale the zephyr wafted from the bosom of the ocean! But the gentle breeze is often succeeded by the convulsive and desola-

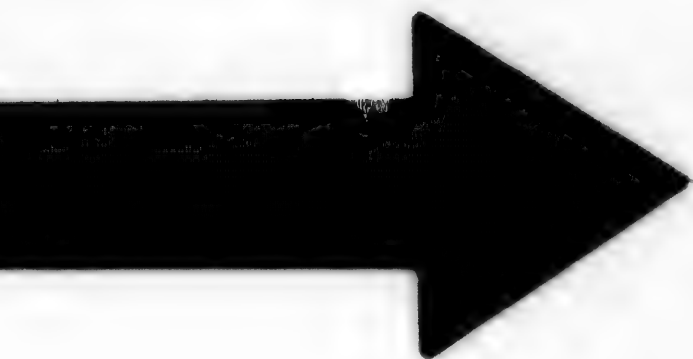
ting hurricane. A dreadful gale of wind occurred at Carbonear, in February, 1841. It was one of the most violent storms in the recollection of the oldest inhabitants. Several houses were damaged, and others blown down. The appearance of the waves, chasing each other in rapid succession, and dashing their maddened foam amid the drifting snow, and the howling of the storm, was truly terrific. Four or five vessels went on shore, two of which were beaten to pieces; and other damage was sustained to a considerable amount. Vessels were wrecked more or less in every harbour in Conception Bay, and the effects of the gale were felt in most parts of the island.

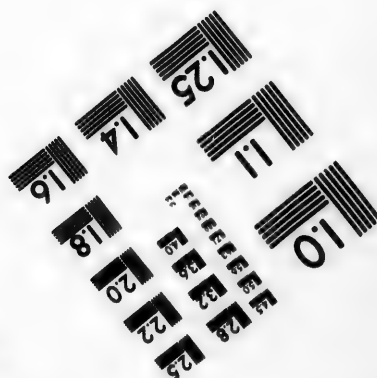
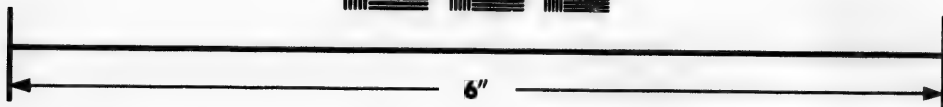
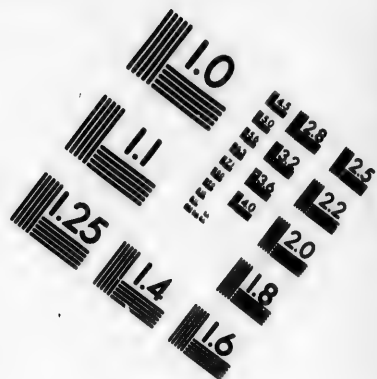
During the past year several shipwrecks occurred on the coast of Newfoundland, and in the year 1842 several vessels were lost upon our shores, amongst which was the brig Florence, having on board 87 passengers from Rotterdam, bound to New York, and out of whom only 37 succeeded in reaching the shore alive. One of the most melancholy shipwrecks that ever occurred on the coast of Newfoundland, was the loss of the Harpooner, in 1817. I furnish the following account for the information of the reader, who may never have read or even heard of the circumstance:

“On the 26th of October, detachments of the 4th Royal Veteran Battalion and their families, with a few belonging to other corps in Canada, in all 380, embarked on board the ship Harpooner, Joseph Bryant, master, and sailed from Quebec on the afternoon of the 27th, bound to Deptford, in charge of Captain Prime. On the passage to

the Gulf of St. Lawrence, moderate weather and favourable winds prevailed, but on arriving in the Gulf, the weather proved boisterous, and the wind contrary. Not a sight of land nor an observation of the sun could be depended upon for several days. On Sunday evening, the 10th of November, a few minutes after 9 o'clock the second mate on watch called out, 'The ship's aground!' at which time she lightly struck on the outermost rock of St. Shotts, in the island of Newfoundland. She beat over and proceeded a short distance, when she struck again and filled. Encircled among rocks, and the wind blowing strongly, the night dark, and a very heavy sea, she soon fell over on her larboard beam-ends, and, to heighten the terror and alarm, it was perceived a lighted candle had communicated fire to some spirits in the master's cabin, which in the confusion was with difficulty extinguished. The ship still driving over the rocks, her masts were cut away, by which some men were carried overboard. The vessel drifted over near the high rocks towards the main. In this situation every one became terrified; the suddenness of the sea rushing in, carried away the berths and stanchions between decks, when men, women, and children were drowned, and many were killed by the force with which they were driven against the loose baggage, casks, and stores, which floated below. All that possibly could, got upon deck; but from the crowd and confusion that prevailed, the orders of the officers and master to the soldiers and seamen were unavailing. Death staring







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every one in the face—the ship striking on the rocks as though she would instantly upset—the screaming and pressing of the people to the star-board side, was so violent, that several were much hurt. About 11 o'clock the boats on the deck were washed overboard by a heavy sea, but even from the commencement of the disaster the hopes of any individual being saved were but very slight, and from this circumstance, combined with it appearing that the bottom of the ship was separating from the upper deck, while the surf beat over her most violently, it was considered as impossible.

“From this time until four o'clock the next morning, all on the wreck were anxiously praying for the light of day to break upon them. The boat from the stern was lowered down, when the first mate and four seamen, at the risk of their lives, pushed off to the shore. They with difficulty effected a landing upon the main land, behind a high rock nearest to where the stern of the vessel had been driven. They were soon out of sight, and it was feared they were lost; but it was so ordained by Providence, these deserving men, in scrambling up the rocks, made their appearance. They hailed us from the top, and reported their situation, saying, to return was impossible, as the boat was staved. The log-line was thrown from the wreck, with a hope that they might lay hold of it; but the darkness, and the tremendous surf that beat, rendered it impracticable.

“During this awful time of suspense, it occurred

to the master, the possibility of sending a line to them by a *dog*. The animal was brought aft, and thrown into the sea, with a line tied round his middle, and with it he swam towards the rock upon which the mate and seamen were standing. It is impossible to describe the sensations which were excited, at seeing this faithful dog struggling with the waves, and reaching the summit of the rock—dashed back again by the surf into the sea, until at length by his exertions, he arrived with the line; one end of which being on board, a stronger rope was hauled and fastened to the rock, and by this rope the seamen were enabled to drag on shore from the wreck a number of souls. At about six o'clock in the morning of the 11th, the first person was landed by this means, and afterwards by an improvement in rigging the rope, and placing each individual in slings, they were with great facility extricated from the wreck. But during the passage thither, it was with the utmost difficulty that the unfortunate sufferers could maintain their hold, as the sea beat over them. Some were dragged to the shore in a state of insensibility. Lieutenant Wilson was lost, being unable to hold on the rope with his hands. He was twice struck by the sea, fell backwards out of the slings, and, after swimming for a considerable time amongst the floating wreck, by which he was struck on the head, he perished. Many who threw themselves overboard, trusting to their safety by swimming, were lost; they were dashed to pieces by the surf on the rocks, or by the floating of the wreck.

"About half past one o'clock, in the afternoon of the 11th, about 30 lives were saved by the rope, several of whom were hurt and maimed. At this period the sea beat incessantly over the wreck, and it being evident the deck was separating, the only means of saving the distressed sufferers failed; for the rope, by constant work, and by swinging across the sharp rock, was cut in two. From that hour, there being no means of replacing the rope, the spectacle became more than ever terrific; the sea, beating over the wreck with greater violence, washed numbers overboard. Their heart-rending cries and lamentations were such as cannot be expressed.

"Families, fathers, mothers, and children, clinging together, the wreck breaking up, stern from midships and forecastle, precipitated all on it into one common destruction. Under these melancholy circumstances, 206 souls perished, and the survivors have to lament the loss of dear relatives and friends.

"The officers and men of the Royal Veteran Battalion, who were returning home after a long and arduous service in Canada, and other remote climates, lost their all, the savings of many years, what they had looked upon with a pleasing hope of making themselves and families comfortable with, on retiring from the service of their king and country. The disaster was so sudden and unlooked for, that not an article of baggage could be saved; not even money, of which some had considerable sums, the produce of the effects sold at Quebec, which were paid for in guineas,

on account of bills of exchange being attended with a loss of seven and a half per cent; for immediately after the ship struck, she bilged and filled, drowning some, who, from motives of humanity, attempted to secure articles of dress for the distressed females who were hurried on deck in an undressed state. The rock which the survivors landed upon was about a 100 feet above the water, surrounded at the flowing of the tide, it being high water soon after the latter of them were saved. It was found impossible for these distressed objects to be got over to the main land until the next morning. On the top of this rock they were obliged to remain during the whole of the night, without shelter, food, or nourishment, exposed to wind and rain, and many without shoes. The only comfort that presented itself was a fire, which was made from pieces of the wreck that had been washed ashore.

"At daylight on the morning of the 12th, at low water, their removal to the opposite land was effected, some being let down by a rope, others slipping down a ladder to the bottom. After they had crossed over, they directed their course to a house or fisherman's shed, distant about a mile and a half from the wreck, where they remained until the next day. The proprietor of this miserable shed not having the means of supplying relief to so considerable a number as took refuge, a party went overland to Trepassy, about fourteen miles distant, through a marshy country not inhabited by any human creature, and the foot-path through a morass. This party

arrived at Trepassy, and reported the event to Messrs Jackson, Burke, and the Rev. Mr. Brown, who immediately took measures for alleviating the distressed, by dispatching men in their employ with provisions and spirits, to assist in bringing all those forward to Trepassy who could walk. Necessity prompted many to undertake this journey barefooted, the hardships and deprivations which they were enduring were so excessively great. On the 13th, in the evening, the major part of the survivors (assisted by the inhabitants, who during the journey carried the weak and feeble upon their backs) arrived at Trepassy, where they were billeted by order of the magistrate proportionally upon each house.

"There still remained at St. Shott's the wife of a sergeant of the veteran Battalion, who was *delivered on the top of the rock shortly after she was saved*, the child and herself doing well. A private whose leg was broken, and a woman severely bruised by the wreck, were also necessarily left there. Immediately after the arrival at Trepassy, measures were adopted for the comfort and refreshment of the detachments. Boats were provided for their removal to St. John's. This being effected, his Excellency, Admiral Pickmore, the Governor, Major King, commanding the troops, the merchants and gentlemen of St. John's, most promptly and generously came forward in the most handsome manner to the relief of the surviving sufferers. After remaining ten days at St. John's, refitting the distressed with clothing and necessaries, his Excellency, the Admiral,

chartered the ship *Mercury*, of Poole, to take them to Portsmouth. On this melancholy circumstance, it is but justice to mention, that Mr. Joseph Bryant, master, Mr. Atkinson, mate, and the seamen of the Harpooner, deserve great credit for their unceasing exertions. To their labour those that came on shore by the rope in a great measure owe their safety.

"Cabin passengers saved—Captain Prime, 4th Royal Veteran Battalion, and lady; Lieutenant Mylrea, ditto, eldest daughter and son; Paymaster Stott, ditto; Mrs. Wilson and eldest daughter; Miss Armstrong; Captain Willock, 103rd regiment; Ensign Gleeson, ditto.

"Cabin passengers lost—Surgeon Armstrong, 4th Veteran Battalion, his lady, son, and two youngest daughters; Lieutenant Wilson, ditto, son and two daughters; Mrs. Mylrea, and two youngest daughters; Miss Pilmore; and three sons of Captain Prime.

"Total number of persons embarked at Quebec in the Harpooner—7 officers, 265 men, 40 women, and 68 children. The troops belonging to the 4th Royal Veteran Battalion, 103rd regiment, Royal Artillery, Drainers, Sappers, and Miners; 41st, 49th, 70th, and 99th regiments Glengory Fencibles, and De Meuron's."

WINTER.

"Thou hast thy beauties; sterner ones I own,
 Than those of thy precursors; yet to thee
 Belong the charms of solemn majesty
 And naked grandeur. Awful is the tone
 Of thy tempestuous nights, when clouds are blown
 By hurrying winds across the troubled sky;
 Pensive, when softer breezes faintly sigh
 Through leafless boughs, with ivy overgrown.
 Thou hast thy decorations too, although
 Thou art austere: thy studded mantle, gay
 With icy brilliants, which as proudly glow
 As erst Golconda's; and thy pure array
 Of regal ermine, when the drifted snow
 Envelopes Nature, till her features seem
 Like pale, but lovely ones, seen when we dream."

BERNARD BARTON.

STERN winter enveloped in snowy robes, and
 wearing a crown of storms, now sits on his icy
 throne, king of the frozen scene! What a change
 is produced upon the face of nature! The field
 decked with verdure is now hardened to marble,
 and covered with the drifting snow. Where are
 now the beautiful tribes of wild flowers that used
 to scent the air with their fragrance? Winter has
 folded them in his snowy arms, and the howling
 storm sings their funeral dirge; the mumuring
 brook is sealed in silence, and on the ice-bound
 bosom of the ponds men and horses traverse.

Autumn, with all her glowing tints, has fled away, and Nature, stripped of all her beauty and fragrance, lies wrapt in the icy shroud of winter. All is bleak, barren, and desolate; but the contemplative mind sees the providence of God in the season of winter. Without frost and snow many vegetable substances would be destroyed, and the soil would not be prepared for the return of spring. A covering of snow protects the tender germs of plants, leaving to them, as it dissolves, a rich manure. It causes the earth to retain some of its previous heat; like the fur on animals, the feathers on birds, or a garment on the human body, which prevents the animal heat escaping. Although the ground, when covered with snow, is protected from the chilling power of frost, yet snow is not warm, any more than the thickest woollen garment we wear is warm; both are poor conductors of heat. The snow prevents the latent heat escaping from the earth, and our clothes prevent the natural heat of our bodies escaping. The effects of snow on vegetable nature are thus described by the prophet: "The rain cometh down and the snow from heaven, and returneth not thither, but watereth the earth, and maketh it bring forth and bud, that it may give seed to the sower and bread to the eater."

Snow is produced by the water of the clouds freezing, and its whiteness is caused by the smallness of the particles of which it is composed. Ice is equally white when pounded. The large flakes of snow, when closely examined, are found to consist of minute darts or stars. These are partly

seen by the naked eye; but when viewed through a microscope they appear like beautiful stars, resembling the varied and elegant forms produced by the kaleidoscope. Professor Rennie, in his "Alphabet of Chemistry," has given several representations of these beautiful crystals. It is wonderful when we look at the effects of frost, to see the windows adorned with elegant figures, produced by the warm air of the room being seized by the chilling atmosphere during the night, and deposited in beautiful crystals on the glass; the houses fringed with icicles, sparkling in the noon-day sun, and reflecting the colours of the rainbow; the running brook stopped in its progress, and chained to the bank; the lake, whose waters, which had been rippled by the breeze, and on whose bosom the bright beams of the sun danced, converted into a solid plain; and all this produced in a single night, is truly astonishing. The power of frost is so very great, that sometimes a noise is heard in the woods, from the expansion of the water frozen in the fissures of old trees cracking and rending them. Sometimes in the night the houses will crack and make a noise as loud as the report of a gun; and a cannon filled with water and screwed up at the muzzle, has been known to burst in a severe frost. We read that in the northern regions, when the thermometer sinks to 40 or 50 degrees below zero, large masses of rock are burst and shivered to pieces, and sometimes vessels have been so frozen in the ice as never again to be removed. Montgomery expresses it in the following lines:—

"There lies a vessel in this realm of frost,
 Not wrecked, nor stranded, yet for ever lost;
 Its keel embedded in the solid mass,
 Its glistening sails appear expanded glass,
 The transverse ropes with pearls enormous strung,
 The yards with icicles grotesquely hung."

In the expansion of water by frost, the wisdom and goodness of God is strikingly manifest; because, if the laws of caloric, or the matter of heat, by which other bodies are governed, influenced the frost, all the water would become solid ice, and the rays of the sun falling on it, instead of melting or decreasing, would be expanding it. Chemists tell us, the general law of nature is, that bodies contract by cooling, and expand by heating, but water enlarges or expands from the effects of cold; this therefore is an exception to the established laws of nature.

One of the most beautiful appearances of nature at this season of the year, is the "silver thaw." It is produced by a shower of rain falling during a frost, and freezing the instant it comes in contact with any object. A most magnificent scene is then produced; every object is clad in a silvery robe; every twig, every tree, and every bush, is beset with glittering pearls, and the whole surface of the snow becomes a beautiful mirror. But this crystal scene is short-lived; a sudden breeze of wind ends the scene, when great damage is done to the trees, their branches breaking down with the weight of ice encrusting them. Philips describes it in the following beautiful lines:—

"Ere yet the clouds let fall the treasur'd snow,
 Or winds begun thro' hazy skies to blow,
 At ev'ning a keen eastern breeze arose,
 And the descending rain unsullied froze.
 Soon as the silent shades of night withdrew,
 The ruddy morn disclos'd at once to view
 The face of nature in a rich disguise,
 And brighten'd every object to my eyes!
 For every shrub, and every blade of grass,
 And every pointed thorn seem'd wrought in glass;
 In pearls and rubies rich the hawthorns show,
 While thro' the ice the crimson berries glow.
 The thick-sprung reeds the wat'ry marshes yield,
 Seem polish'd lances in a hostile field.
 The stag, in limpid currents, with surprise,
 Sees crystal branches on his forehead rise.
 The spreading oak, the beech, and tow'ring pine,
 Glaz'd over, in the freezing ether shine.
 The frighted birds the rattling branches shun,
 That wave and glitter in the distant sun.
 When, if a sudden gust of wind arise,
 The brittle forest into atoms flies;
 The cracking wood beneath the tempest bends,
 And in a spangled shower the prospect ends."

The only trees that now cheer or enliven the dreary landscape are the fir (*Pinus Balsamea*) and the spruce (*Pinus Nigra*) and (*Pinus Aba*), whose dark evergreen branches appear in the midst of the snow. All the rest of vegetable nature appears still in death, until the voice of Spring awakes the slumbering charms of Nature, when all bursts into new life, and fragrance and beauty are spread around. This is an emblem of the resurrection of the human body.

"Shall I be left abandon'd in the dust,
 When trees, and plants, and roots, and flowers revive?
 Shall Nature's voice, to man alone unjust,
 Bid him, though doom'd to perish, hope to live?

Is it, for this, fair Virtue oft must strive
 With disappointment, penury, and pain?
 Not heaven's immortal spring shall yet arrive,
 And man's majestic beauty bloom again,
 Bright through the eternal year of love's triumphant reign."

In Newfoundland, January and February are the coldest months of the year, when the thermometer sometimes sinks below zero; but at the coldest times not more than 10 degrees below it. Our winters are warm when compared with those of some of the North-American colonies. It is an admitted fact, that the climate of Newfoundland has gradually undergone a change within the last thirty years, and is now much warmer than it was then. This change may in part be attributed to the great improvement in agriculture, the draining of marshes, and the clearing of the forests; and it may partly originate from some unknown causes in the atmosphere. Most writers affirm that the northern parts of Europe have become much warmer than they were a few centuries ago. St. John's, the capital of Newfoundland, is in $47^{\circ} 33'$ north latitude; London, $51^{\circ} 30'$; Dublin, $53^{\circ} 20'$; and Edinburgh in $55^{\circ} 53'$. Thus St. John's is nearer the equator than any of the above-mentioned places; and yet, instead of being warmer, is much colder than Great Britain. To account for this, the great astronomer, Dr. Halley, supposed that a comet had formerly struck the earth obliquely, and changed the position of its axis of rotation. In consequence of that event, the North Pole, which had been originally very near to Hudson's Bay, was changed to a more easterly position; but the

countries which it abandoned have been so long a time and so deeply frozen, that vestiges still remain of its ancient polar rigour, and that a long series of years would be required for the solar action to impart to the northern parts of the new continent the climate of their present geographical position. But this, of course, is mere theory, and not to be depended on.

One of the coldest winters ever experienced in Newfoundland, was in 1818, when it is said, the thermometer frequently sank from 20 to 24 degrees below zero. During this severe winter Admiral Pickmore, the governor, died. His remains were deposited in a vault of the church, but subsequently carried to England.

All the migratory birds have now left our ice-bound shores for a sunnier atmosphere, and for more congenial climes. The principal birds that now enliven the groves of Newfoundland, are the woodpecker (*Picus*), the owl (*Strix*), the snow buntings (*Emberiza Nivalis*), which are to be seen in flocks, dressed in their silvery plumage, hopping about the snow. Yesterday, January 20th, I saw a pine grosbeak (*Loxia Enucleator*), which had been killed. It is one of the handsomest birds which visit us. The plumage is a rich crimson colour, fading to greenish brown. These birds, and the crossbill (*Curvirostra Americana*) are seldom seen. It is remarked, that the appearance of the crossbill is a certain indication of a severe winter. The little black-capped titmouse (*Parus Artricapillus*) is seen enjoying the summer sun, and braving the winter

storm. A short time ago I saw the eggs of a jay (*Corvus Canadensis*), which had been taken from a nest found in the woods. They were of a dirty white colour, and about the size of marbles. The ptarmigan, or partridge of Newfoundland, is now pursued by the fowler. Great numbers of these birds are killed during the winter season.

"With slaughtering gun the unwearied fowler roves,
When frosts have whitened all the naked groves;
He lifts his tube, and levels with his eye,
Straight a short thunder breaks the frozen sky."

The ptarmigan, or partridge of Newfoundland, turns white in winter, and is of a reddish brown colour in summer. It is probably the grouse or snow-hen (*Petrao Abus*) of Greenland and Iceland, which also is white in winter, and its summer dress of a reddish colour.

Walking with a person in the woods a short time ago, our attention was arrested by the appearance of something very white on a large stump of a tree. On approaching nearer we perceived it to be the snow-owl (*Strix Nyctea*). My companion endeavoured to reach it with a stick, by trying to creep softly towards it, but its acute power of hearing prevented us from getting very near it. The plumage appeared very soft and white, and it was about the size of a goose. A few years back they were very plentiful in this neighbourhood. A person residing here informed me, that he has killed between seventy and eighty in one winter. His mode of catching them was to tail fox-traps and rat-traps (baited usually with

the flesh of the fox), fastened to the limbs of old trees, where they were in the habit of perching. Their flesh is considered very delicious. The owl, by the superstitious, has been considered a bird of ill-omen. Spenser's "Faery Queen" has frequent allusion to the owl as a messenger of woe, and Shakspeare says in his "Richard III."

"Out on ye, owls! nothing but songs of death."

On the sea-coast the croak of the common crow (*Corvus Corone*) is heard, the gull (*Larus*) is on the wing, flocks of wild ducks (*Anas Fusca*) are seen sailing along on the surface of the water, and the loo, or great northern diver (*Colymbus Glacialis*) is heard at a considerable distance. I dined with a family a short time since, where I partook of a very fine young loo. It was about the size of a goose, and remarkably fat. The flesh was rather dark, but of good flavour; it weighed, when prepared for roasting, six pounds. Yesterday we saw (about two hundred yards from the shore) three seals (*Phoca Vitulina*). About a week ago (January 8th), I saw a very large harp seal (*Phoca Groenlandica*), which was caught in a net, part of which I ate. It had a very nice flavour, and altogether superior to the taste of the young seal caught in the spring. Mr. Clouter informed me, that some years ago he was travelling over a pond, when he espied something black at some distance on the ice, which he supposed to be a dog; but on coming up to it, was surprised to find it was a very fine seal. The distance from the sea was six miles. One spring the

ice was packed and jammed so tightly in Bonavista Bay for several weeks, that the seals on it could find no opening to go down, and numbers crawled upon an island (probably taking it to be a lake of water), when some people happened to land upon the island, and discovered them. No less than 1,500 seals were slaughtered among the bushes. I have been informed by several respectable individuals, that sometimes, when the ice has been jammed close on one side of the promontory of Cape Bonavista, the seals, during the night, have crawled over the land (a distance of half a mile) to the water on the other side.

Wandering along the sea-shore the other day, I observed the margin of the beach strewed with sea-urchins (*Echinidae*), usually called in Newfoundland, ose-eggs. These animals are frequently eaten, and are about the size of an apple, and covered with a shell or calcareous crust, from which proceed long spines or points, moveable at will, by which this singular creature is enabled to creep slowly along. It is found in all parts of Newfoundland, clinging by the suckers which it possesses to the rocks along the sea-coast, and to the wharves and stages. Geologists have found the shells of these animals in a fossil state in the more ancient strata of the earth. I gathered a quantity of muscles (*Anadonta*). This animal inhabits a two-valved shell, and is found in fresh water, as well as salt. It moves along by a succession of jerks, which are performed by the protrusion of a muscular foot. This animal fastens itself to the rocks by some kind of threads which

it has the power of emitting. In times of scarcity many families in the northern parts of the island have subsisted for weeks wholly on this fish. A friend of mine at Carbonear some years ago placed a lot of muscles one evening in a desk. On going to take them away in the morning, he was surprised to find a mouse (*Mus Domesticus*) caught by the head between the shells of one of them.

The hare (*Lepus*) is now bounding over the snow. The fur of this animal is at this season perfectly white, but turns brown in summer. Foxes are now being caught in the traps. The species usually captured here are the common red or yellow fox (*Canis Fulvus*), and the patch or cross fox (*Canis Decussatus*), the black or silver fox (*Canis Argentatus*) being seldom seen. The beaver (*Castor Fiber, Americanus*) is now caught in several parts of the island. An old furrier residing here informed me that he has killed between seventy and eighty in one winter in the bottom of Bonavista Bay. This animal and the otter (*Lutra Canadensis*) have been so much sought after for the value of their fur, that they are now become comparatively scarce in the country. A description of the manner by which otters enjoy themselves, sliding down the banks of the streams, and the ingenuity of the beaver in building his house, is given in almost every book of natural history. I saw a very fine marten or wood-cat (*Mustela Martes*) which was caught in a trap a few days ago in this neighbourhood; it was nearly two feet long. Formerly great numbers of these animals were killed by the Indians, but

they are now seldom seen in this part of the country. Several caribou or rein-deer (*Cervus Taran-dus*) were killed in Trinity Bay this winter (1843). Some of the carcasses were exposed for sale when I was at Trinity this winter, at 6d. per pound. In some parts of the island they are very plentiful. They are frequently seen in droves of from two to three hundred in number: they weigh from two to six hundred pounds. On the western part of the country as many as eighty or ninety have been killed by one family during the autumn. Some years ago, I saw a young one brought by Mr. Thomas Knight, of St. John's, from Green Bay. It was a very pretty creature, and so timid that the least noise would produce a tremour over the whole body. On placing my hand on it, it began to quiver and shake in every limb; it was the meekest and gentlest animal I ever saw. Mr. Knight informed me, that in Green Bay several fawns, at different periods, had been kept by persons a considerable time, and they appeared quite tame.

It is very probable that the rein-deer of Newfoundland could be naturalized, and might become of vast importance to the country. Something might be done by the Agricultural Society, lately established at St. John's, by offering a reward for the domestication of two or three of these animals by way of experiment. The rein-deer is every thing to the Laplander, being his food, clothing, horse, and servant. It is said that in 1699 a deer drew an officer with despatches eight hundred miles in forty-eight hours, and that on his arrival

the deer immediately fell down dead. They are animals of great speed, sometimes travelling at the rate of 19 miles an hour. The following account is taken from the "Edinburgh Cabinet Library:"—"There is scarcely any race of men so dependent for their subsistence on a single animal, as the Laplanders are on the rein-deer. Their cold, barren country, covered with snow and ice nine months of the year, produces few vegetables fit for human food, and during the season when fish cannot be procured, they would perish of absolute want were it not for the milk and flesh of their deer. It forms their chief, or rather only, wealth, the poorer classes possessing from 50 to 200, the middling from 300 to 700, and the rich from 1000 to 2000. They are now mostly in a domesticated condition, though wild ones are still sometimes met with in Dalecarlia and the Koelen Mountains. These useful creatures are of a grey or brown colour, darker when they have got their new coat, and becoming lighter afterwards. They are about four feet high, and the same in length; those found wild, however, being larger than the domesticated ones. The horns, which vary more than those of any other of the genus, are in the male often four feet long, with numerous branches; those of the females are smaller, with fewer divisions. The foot and eye of this creature are also beautifully adapted to the country it is destined to inhabit. The hoof is very widely cloven, and when pressed on the ground, the two parts expand, thus forming a broad surface, and preventing the animal from sinking in the soft snow, amidst

which it spends a greater portion of its life. On the foot being raised, the divisions again fall together, making a curious crackling noise, resembling repeated electric shocks. Besides the usual eyelids, he is provided with a nictitating membrane extending over the eyes, through which, in snowstorms, he can see without exposing these delicate organs to any injury. The rein-deer is not capable of carrying much weight, being better fitted for running or drawing. In a sledge a pair of them have been said to perform a journey of 100 miles, or as the Laplanders express it, will change their horizon three times in twenty-four hours. To their acuteness of sight and smell their master trusts his life in the most dangerous paths, during the darkest nights of his stormy winter, and it is seldom he has to regret this confidence. Their milk is an important article of food, and, according to Linnæus, is dressed in nineteen different forms. Their flesh is eaten either fresh or salted, their skins form tents, clothing, and bed-covering, their sinews thread for sewing, and their tongues are a well-known article of commerce. Their food is principally the leaves and buds of trees, the catkins of the birch, and the rein-deer moss which they search for with instinctive sagacity beneath the snow. They also eat frogs, snakes, and even the lemming, often pursuing the latter to so great a distance as not to find their way home again."

The most formidable animal in Newfoundland is the wolf (*Canis Lupus Occidentalis* of Richardson). In some parts of the island they are very plentiful, where they prove very destructive

to the cattle, destroying a number of cows and sheep. These animals were rather numerous in the neighbourhood of St. John's three or four years ago, and were prowling about so near the dwellings, as to endanger the lives of the inhabitants. An act was passed by the local government, entitled "The Wolf-killing Act," under the provisions of which every person killing a wolf, on the presentation of the head and skin was to receive a reward of five pounds. In the winter of 1838, one of these animals was killed in the vicinity of St. John's. It was kept for some time at a house, and a charge of sixpence made from every person who went to view it. Some time previous to the destruction of this animal, a child, between five and six years of age, left his home in the country for the purpose of going into the town to school, but was never heard of after. It was conjectured he fell a prey to the wolf above mentioned. On the 18th of March, 1842, three men, natives of the neighbourhood of Colliers in Conception Bay, brought to R. J. Pinsent, Esq. J. P. at Brigus, the skin (and head attached) of a male wolf, for the purpose of obtaining the reward of £5 under the Wolf-killing Act. From them and others Mr. Pinsent learned the following particulars of this animal:—"This wolf is the same that was caught in a trap near St. John's last spring, on which occasion he lost his left fore leg. Since that time he has been ranging about from the neighbourhood of St. John's to the head of Conception Bay, and during the last summer, fall, and present winter, has killed several cows,

sheep, goats, &c. Being so remarkable, from the loss of one of his legs, he has been particularly noticed and identified by several persons. About a fortnight ago he made his appearance in the neighbourhood of Colliers, at the head of Conception Bay; there he killed a cow belonging to Lawrence Brien, of Broad Cove Gasters, and destroyed several sheep, goats, and fowls. He was seen repeatedly near the tilts of the poor people, and in many instances seized the smaller animals close to the doors of the tilts. On the 15th inst. the three men above mentioned went in pursuit of the wolf; they tracked him on the snow seven or eight miles, his wounded leg leaving in many places marks of blood, and at length they came up with him at Turk's Gut, about four miles from Brigus. He was observed by them crouched in a little thicket of bushes, opposite the door of a tilt inhabited by a poor widow woman. He was at the distance of about twenty feet from the tilt, looking intently at some sheep which were in a shed attached to the tilt, and waiting apparently for the sheep to come out to spring upon them. When he observed the men, he got up and made off, running very fast, with a sort of limping spring in his gait. As soon as he broke away from his cover in the bushes the men pursued him, and one of them fired and knocked the wolf down in the snow, but he immediately recovered himself, and continued his flight. Another of the men then fired, and brought him down, breaking one of his hind legs; the wolf, however, still endeavoured to scramble off, hauling himself along

on the snow, but with great difficulty. One of the men had by this time re-loaded his gun, which he then discharged into the wolf at a distance of about twenty-five feet; this shot struck him in the side and killed him. The guns were loaded with swan shot; and on inspecting the skin of the wolf, after his death, fifty-six shot holes were discovered in it. The animal made no resistance to the men, but endeavoured to run from them; he uttered no cry whatever during the whole of the pursuit, neither barking, howling, nor growling, not even when he was struck by the shot. This wolf is a noble sample of his race; his colour is silvery and remarkably handsome; he appears to be about five or six years old; his dimensions are as follow:—

	ft.	in.
Length of body from nose to insertion of tail	5	0
Length of tail	1	6
Total length	6	6
Height of fore shoulder	2	9
Do. at haunch	2	8

His jaws and teeth very large—ears pricked—length of lower jaw 9 inches—very large paws, like a dog's—spread of mouth when stretched open, 7 inches. The skull bones are comparatively small, but the muscles of the mouth and head remarkably large and powerful. His general appearance is much like a silver-haired fox. The skin of this wolf has been stuffed and for some time kept in the court-house at Brigus,* as a fine specimen of the Newfoundland wolf.

* It is now in the Museum of the Agricultural Society of St. John's.

The age of the wolf is from fifteen to twenty years. The female goes with young sixty-three days, and has from five to nine at a litter, which are born with their eyes shut. In these respects they are exactly like the dog. It is thought by some that dogs are wolves in a state of domestication, though the manner in which it was effected is unknown: there are instances of wolves having been tamed to such a degree, as to exhibit the greatest attachment to man. That they manifest great affection for their own species, is evident from the following instance given by Mr. Gosse. "A few years ago, some men were going up Lee's Pond, a lake about six miles long, near Stanstead, which was frozen at the time, when they saw before them a party of wolves crossing the pond. One in the centre appeared sick, and was surrounded by the rest in the manner of a body-guard. One of the men, who had a gun, pursued them, when some of the wolves took flight, leaving others with the supposed sick one, which, however, dropped off one by one as the pursuit grew hotter, leaving at last only two with it: the man then fired at one of these two, but without killing it, and they both then fled. On coming up to the remaining one, they found it was an old she-wolf, completely blind, as was supposed, from age alone, as her teeth were almost worn down. After her last attendants had left her, she attempted to continue her course, but in a very uncertain manner, sometimes turning on her steps, or going in a circle. The men put a rope around her, and led her to the town. In the woods they found her den,

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strewn with a vast number of deer's bones, fragments of flesh, &c., all around which the snow, though three feet deep, was trodden hard and smooth, and from the number of paths leading to this spot, it appeared evident that this aged wolf had for a long time been supplied with prey by the assiduous attentions of others."

The wolves principally occupy the southern and western parts of Newfoundland. In the northern parts, where they were once so plentiful, (their dismal howlings producing terror on the minds of the inhabitants) they are now seldom seen. In proportion as the population, and as agriculture are extended, so will the monarch of the Newfoundland forest disappear, until at length, as in England and Ireland, its existence will be no longer known. The history of almost every nation furnishes us with proofs, that in the same ratio as the empire of man has been enlarged, so has the animal kingdom been invaded and desolated. The history of Newfoundland bears evidence, that some of the tenants of the ocean and of the feathered tribes have become extinct by the agency of the destroying hand of man. It is a fact, that according as any country advances in civilization and refinement, so animals diminish, and some species become extinct. Their destruction is permitted by God, no doubt for some wise and important purposes in the economy of nature.

It is astonishing to what a distance sound can be heard in cold frosty weather. Going from Bonavista to Bird-Island Cove one night through

the woods, our attention was suddenly arrested by a metallic sound, like the ring of a hatchet when a person is cutting timber. My friend began to indulge in superstitious feelings, and these feelings were increased by the consideration, that we were near a grave by the road-side, and also knowing that no person was cutting timber at that hour. The place from whence the sound proceeded was at least the distance of half a mile. I never heard a similar sound before, except from the hatchet; however, I endeavoured to allay the fears of my friend by stating the probability of its being a sound made by some bird, perhaps the three-toed woodpecker (*Picus Tridactylus*) picking the bark from the tree. I have since been informed by persons who lived a winter in the bottom of Bonavista Bay, that at the hour of midnight the metallic sound would frequently dingle in their ears, and at such an hour produce quite a solemn effect; they describe it as being like the sound of hatchets at work in the woods, and appeared a considerable distance off, but they never could discover the cause from whence the sound proceeded. We generally hear sounds more clearly and distinctly in the night than in the day; this may be partly owing to the stillness of the season; but the principal cause is ascribed to the stratum of atmosphere surrounding the earth, not being of equal density in the day, on account of the constant currents of hot air rising and cold ones descending, while at night an equality of temperature is produced, and sounds are conveyed with more facility. In the Arctic region

Lieutenant Foster kept up a conversation with a man a mile and a quarter distant. It appears that still water and ice are remarkably good conductors of sounds. A stroke of a stick upon a frozen mass of ice will be heard a long distance.

About fifteen years ago, at this season of the year, a very singular and most extraordinary sound was heard in the neighbourhood of Bonavista, and of Bird-Island Cove. It commenced about 3 o'clock in the afternoon, and lasted until the next day about noon. The men at Bird-Island Cove were going about nearly all night, some with loaded guns—some with hatchets—and others with whatever weapon they could command. The sound is described as resembling distant thunder. It has also been compared to the growl of a bear, the bellowing of a cow, &c., conveying a deep sepulchral tone. What is most strange and unaccountable is, that it appeared alongside of every body, although at the time some were at a distance from each other of from one to five miles. Men hauling wood at the time thought the sound came out of the ground immediately under the slide or sledge, and in some instances were so alarmed as to leave the wood behind. Several females thought a bear had got into their bedrooms, and ran terrified from their dwellings. James Porter informed me, that when he first heard the sound he took his loaded gun and proceeded in the direction whence the sound came (supposing it had been a water-bear) until he came to the edge of a cliff, when the sound seemed as if it issued out of the

solid rock, and as deep and strong as to make his whole body tremble. By what means this singular sound was brought into existence I am unable to explain. It could not have originated from the rumbling noise made by the ice, because no ice at the time was near the coast—neither would the noise made by the ice be heard in the peculiar manner this sound was heard; and it does not appear to have been symptoms of an earthquake, because no trembling, nor the slightest motion was felt in the earth; and nothing remarkable occurred immediately after the sound passed away, excepting that two days afterwards one of the heaviest seas ever known took place. The origin of this sound could hardly be the eruption of some distant volcano (the nearest of these being in Iceland); though Sir Stamford Raffles states, that the detonations produced by the eruption of Tomboro, a volcanic mountain in Sumbawa, were heard at a distance of nine hundred and seventy miles. This sound is termed by the inhabitants of Bonavista and Bird-Island Cove, "the thunder growl." It probably had its origin in the atmosphere.

On the north side of the Northern Cove of Bird-Island Cove is a perpendicular cliff of solid gritstone, attaining an elevation of about 120 feet above the level of the sea. A few years ago a portion of this cliff fell with a tremendous noise. About forty feet from the edge of the cliff is a fissure two feet wide, extending about two hundred feet in length. It goes through a solid mass of rock, and appears to be the full depth of the

cliff. Whether this has been produced by subterraneous fires or any other agency to which earthquakes are attributed, I cannot say; certain it is, however, that some potent agency must have been at work to have produced such a chasm.

I remember, in 1838, going to visit a spot that foundered in the neighboured of Harbour Grace, where nearly half an acre of ground was broken off from the main land and moved towards the sea, leaving a chasm of about three hundred feet in length, ninety feet wide, and forty feet deep. The piece of land detached had the trees and grass growing upon it undisturbed; the noise made by the fall was heard more than a mile distant, like the sound of thunder. I have been informed by several respectable individuals, that at the time of the great earthquake at Lisbon, in 1755, the effects were felt at Bonavista. The sea retired, and left the bed of the harbour dry for the space of ten minutes, when it again flowed in and rose to an unusual height, overflowing several meadows for about the same space of time as it had retired, and the waters on each side of the cape were greatly agitated. This statement is not at all improbable, when we consider that the effects of the tremendous earthquake of Lisbon were felt all over Portugal, throughout Europe, in the north of Africa, and even in the West Indies, and upon the continent of America. We read that in Scotland and England similar effects were felt as at Bonavista. A remarkable elevation of the waters of Loch Lomond was ob-

served, the Thames rose and fell, and the seas in every part of Europe were agitated.

Our coldest wind in the winter is from the north-west. Generally, when it is from this quarter, the atmosphere is clear, bracing, and salubrious. The climate of Newfoundland is universally admitted to be more favourable to the health of man than most other countries in the world. A walk on a fine clear winter's day is very pleasant, and promotes health. Having engaged to accompany the Rev. George Ellidge as far as Trinity, we set forward from Bonavista, and arrived at Catalina about two o'clock, P.M. I spent the remainder of the day knocking out of the rocks along the sea-shore some of what is called "Catalina Stone." This is iron pyrites, formed by a combination of iron and sulphur. These pyrites are embedded in greywacke, or slate rock, in square pieces of from one to three inches in diameter. They look like so many pieces of gold shining in the rays of the sun. In beating them out of the rock the stench of the sulphur was almost suffocating. I was obliged to desist several times in order to recover myself. It is very probable that some very valuable mineral springs exist at Catalina, for mineralogists attribute the hot temperature of almost all the mineral waters to the springs running through pyrites. A considerable quantity of sulphur is prepared by exposing iron pyrites (sulphuret of iron) to heat, when part of the sulphur is driven off in vapour, and may be collected in water.

This mineral is also found in other parts of

Trinity Bay,* and it exists in most mines. It was the fire-stones of the Red Indians, from which they used to obtain fire by striking two pieces together like flint and steel. It is said, the early adventurers who visited Catalina supposed the radiated pyrites to have been gold, and that Sir Humphrey Gilbert, in 1783, loaded his vessel with it. ✓

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215. On Wednesday morning we started for Trinity, (about twenty miles distant) which place we reached at 3 o'clock in the afternoon of the same day. The woods extend three miles into the country from Ragged Harbour, through which our road lay. Occasionally the measured strokes of the woodman's axe broke the silence of the forest; all else was still as death, save the sound of our feet and voices. These fine woods consisted of black spruce (*Pinus Nigra*), white spruce (*Pinus Alba*), and the fir (*Pinus Balsamea*); the red spruce (*Pinus Rubra*), which is indigenous, is seldom met with. Our largest spruce and fir are from 6 to 14 inches in diameter, and from 30 to 50 feet long. The spruce is generally used for building boats, oars, fences, spars of various descriptions, planks, and hand-barrows. It is also used for firing, and from its branches that wholesome beverage, spruce-beer, is made. The fir is mostly used for the frame-work of dwelling-houses and stores, clapboards, oil hogsheads, salmon and herring barrels, casks for screwed-fish, shingles,

* I have found a considerable quantity of pyrites at Broad Cove, on the south shore of Conception Bay.

and fire-wood. The turpentine bladders of this tree are used in cases of fresh cuts and other wounds. All the rest of the country through which we passed was one vast savanna, extending a distance of about nine miles, fringed with small stunted woods, which was covered with a lichen, Negrohair (*Alectoria Jubarta*) called in Newfoundland Molldow. It is probably the chief food of the deer during the winter; cows are very fond of it, and are frequently let loose in the woods to feed upon it.

About half way between Catalina and Trinity is a large larch or juniper (*Pinus Pendula*) under which travellers sit down to rest themselves, and, in obedience to the law of custom, here we halted to take some refreshment. The larch is a very beautiful tree when seen in the flowering season; its leaves are long and narrow, placed in little tufts, which spread like a brush. It has the habits of an evergreen, though it is not one, as its leaves fall in the winter. It produces resin and the kind of turpentine called venice. It is remarked that the top of the juniper or larch generally bends towards the east, and it has frequently directed travellers as to the course they were going. This tree may be considered as the oak of Newfoundland, being the hardest and most durable of all our forest timber. Of late years it has superseded the use of the birch in the construction of ships. It is also used for making cart-wheels, and for other valuable purposes. When dry, it makes the best fuel of all our forest trees.

We observed crawling upon a little crust of snow a beautiful caterpillar, which appeared nearly ready to go into the pupa. We wrapped it in a slip of paper, and took it with us. It was about an inch long, and covered with a coat of very fine brown hair. This covering was no doubt to protect it from the cold during the severity of winter, and to preserve it from becoming torpid. It relieves the dulness of winter to see an insect stretched upon the snow enjoying the reviving influence of the sun. John Hollohan informed me, that when he lived in the woods a few years back, one fine day in the month of January, he saw the whole surface of a marsh covered with various species of insects, embracing a circumference of half a mile. It is well known that insects will live in the coldest atmosphere, and will revive after being cut out of the solid ice. I have read, that on the last day of Captain Parry's attempt to reach the north pole over the ice, a species of alphis was found in lat. $82^{\circ} 26' 44''$, about 100 miles from the nearest known land. We saw no sign of any animal but the small tracks of the field-mouse (*Mus Leucopus*). The ground was only covered with snow in patches, which left exposed the whortleberry plants (*Empetrum Nigrum*), and the partridge berry plants (*Gaultheria Procumbens*). The berries were good, as the frost makes them juicy and very sweet tasted. Amongst the sheep laurel (*Kalmia Angustifolia*) and swamp laurel (*Kalmia Glauca*), called in Newfoundland Gould Withy, (when boiled with tobacco and sprinkled over the parts affected,

it is an infallible remedy to cure dogs of the mange) was plenty of Indian tea or Labrador tea plant (*Ledum Latifolium*), well seasoned and much superior to any I saw used during the winter. This plant is used as tea by the poor of this country generally; it is also very often used medicinally for disorders of the stomach, and with good effect.

During our stay at Trinity we visited English Harbour (three miles distant), where we attended a missionary meeting, the first which was ever held there. In Great Britain these meetings take place in the month of May, but in Newfoundland the winter season is generally preferred to the spring. After spending three very pleasant days at Trinity and its neighbourhood, we returned home. During the journey back our guide showed us a place where a poor man lost his way last winter, and after being exposed to the cold for three day and nights without fire or food, with great difficulty crawled to a tilt in the vicinity of English Harbour. He was dreadfully frost-bitten, and has lost both his feet. This clearly points out the necessity of having a line of road between these places. Trinity and Catalina are the two principal harbours on the northern coast of Newfoundland, yet without a guide no stranger could possibly find his way from one harbour to the other. The whole distance is nearly a champagne country, consequently the road would be nearly level, and on every side materials are to be found for the formation of a good road. The formation of roads is of the first importance in

developing the latent resources of the country, and ought to be facilitated by every possible means.* The storms of winter are sometimes laden with death; in some parts of the country persons are lost crossing over bleak districts—passing over barrens where no road is made; a snow storm frequently comes on, and the traveller, unable to see any distant object to guide his way, sinks and is lost.

Some of the harbours of Newfoundland are now frozen over, in some of which a passage way, or canal, is cut through the ice for the ingress and egress of ships. That healthy exercise, skating, is now pursued. The sleigh now moves noiselessly along over the snowy ground. The sleigh of Newfoundland is not a vehicle of business, sleighing being pursued for recreation and pleasure. Sleighing parties are mostly confined to the environs of St. John's. It is a most delightful mode of travelling. I have frequently seen trains of sleighs passing swiftly along the Portugal Cove Road, while the brass harness glistened in the sunshine, and the tinkling of the little bells on the horses' necks presented a scene of gaiety and animation.

Though our climate is cold and our shores have been pronounced inhospitable, yet we are not without our comforts. It is true Newfoundland does not produce the wines of France, the

* The opening of good roads has greatly increased the value of land; some having been sold this year (1844) in its primeval state, situated on the Bay Bulls road, at from 10 to 84 shillings per acre.

orange groves of Spain, Portugal, and Italy, the sugar and cocoa nuts of the West Indies, nor the costly silks and aromatic odours of China and India. But we are free from those dreadful agents of destruction, earthquakes, volcanoes, and tornadoes, that sometimes desolate villages and towns in these countries, which are covered with a blooming vegetation. The poisonous breath of the hot Siroc and the wet Monsoon, which spreads pestilence in the luxuriant countries of the east, never reaches us. The hiss of the boa-constrictor, or of any other snake or reptile, is never heard in Newfoundland. Frogs, toads, lizards, or snakes having never appeared amongst us. In this respect Newfoundland has been called the Ireland of America. Although the soil of Newfoundland hitherto, has not yielded wheat in sufficient quantity as to preclude her dependence on other countries for a supply of this article, yet it conceals valuable mines, while the ocean surrounding her shores affords the greatest sources of wealth of any other country. Specimens of her mineral wealth are now lying on the desk upon which I am writing. They consist of limestone, copper, iron, coal, gypsum, and marble, which were presented to me by J. B. Jukes, Esq. who made a geological survey of the sea-coast of the island. Mr. Jukes stated to me, that the soil on the western part of the island reminded him of England; that it was very rich and highly susceptible of cultivation, and capable of giving sustenance to a large population. In these mines and the capabilities of the soil, we behold the chaotic

elements of future greatness. Considering her geographical position and great sources of wealth, there is very little doubt but that Newfoundland will advance, and yet take her stand amongst the mighty nations of the world.

Angling is now pursued, as our ponds at this season abound with myriads of trout (*Salmo Fario*) and salmon peel (*Salmo Trutta*). Sometimes no less than from twenty to thirty dozen are caught in the course of a few hours, by cutting holes in the ice and placing the lines in them. Without winter the business of Newfoundland could scarcely be carried on, as during the winter season the firewood is drawn from the interior over the snow in slides and catamarans or sledges. It is now that the fisherman is busily employed, mending his nets, repairing his boats, and procuring timber to repair or rebuild his fishing-room for the approaching summer. It is now that the vessels are being prepared for the coming sealing voyage. It is now that the poor dog is hard-worked. No animal in Newfoundland is a greater sufferer from man than the dog. This animal is employed during the winter season in drawing timber from the woods, and he supplies the place of a horse in the performance of several duties. I have frequently seen one of these noble creatures drawing three seals (about one hundred and thirty pounds' weight) for a distance of four miles over huge rugged masses of ice, safe to land. In drawing wood the poor animal is frequently burdened beyond his strength, and compelled to proceed by the most barbarous treatment. Of the cruel con-

duct of many an unfeeling master I have often been a witness, and I have seen the poor creatures left dead on the side of the road. I have twice seen the head of this sagacious animal stuck upon the stump of a tree, exhibited as a memorial of the cruel and inhuman conduct of his master. Nor does the horse at this season escape being over-loaded, and treated with great barbarity. I have seen a man beating this admirable creature with a stick larger than a man's arm, until one of his eyes was knocked out of his head. Some of these animals die from the cruel treatment they receive.

"Each heart of feeling to the beast is kind,
While brutal actions show a brutal mind;
They who unmov'd can hear the dying cry
Of brutes, may see unmov'd a brother die;
Remember, He who made thee, made the brute;
Who gave thee speech and reason, form'd him mute;
He can't complain, but God's all-seeing eye
Beholds thy cruelty, and hears his sigh.
He was design'd thy servant, not thy drudge;
And know that his Creator is thy judge."

I well remember seeing some boys taking a poor dog to drown him. It is almost a general practice in Newfoundland, that after the poor animal has faithfully served his master, and is no longer able to draw wood, there is a large stone sufficient to sink him, fastened firmly round his neck, and he is then thrown into the sea to die. The boys were engaged in this most cruel and unfeeling practice when I saw them, but; in this instance, instead of taking him to the sea, where there was deep water, they were endeavouring to

drown him in a brook with hardly sufficient water to cover the poor animal. The owner of the dog was looking on, and appeared pleased to see his children practising such cruelty. I remonstrated with him on the impropriety and inhumanity of such a procedure. He said, "I thought as every body else drowned their dogs when they got too old to work, it was no harm for me to do so." I said, "But do you not conceive it to be unfeeling and sinful to take away the life of your poor dog, after having laboured for you all his life? and do you not think that your children, from practising such cruelty, will gradually become insensible to all sorrows but their own? and if the practice be continued in, it is very probable that they would witness unmoved your own death, as they would the dying agonies of the poor animal they are now endeavouring to drown. Therefore, you ought to give a different direction to their feelings, teaching them not to be thoughtless of the sensations of any thing that has life, and guarding them against any sport or amusement wherein either the larger animals or birds, or even insects, may be treated with cruelty." He said, "I never before heard that it was sinful to drown a dumb animal; if I had thought so I am very sure I should never have done it." I replied, "Cruelty to animals is a sin very little thought of. It is certainly a transgression of God's law; the scriptures say, 'A merciful man regardeth the life of his beast;' this means, that he will be attentive to provide for the wants of those animals that contribute to his pleasure and advan-

tage; not to overload and work them beyond their strength; not to drown them when old, nor to beat or unmercifully injure them in any way." He said, "I am sorry I never thought of this subject before, for I have drowned many dogs during my life; we will, if you please, go and rescue the dog from the hands of the children." We found the poor dog nearly choaked from the pressure of the rope round his neck, to which the stone was attached, in order to sink him when thrown into the water. After cutting off the rope, I was glad to find he was still able to walk, though the boys had been endeavouring to drown him for nearly half an hour. It is now nearly four years since this occurrence took place, and the dog was living the last time I was at Carbonear, although not able to draw wood in the winter season; and the person who owned him exceedingly regretted that he should have ever been the cause of taking the life of an animal.

Cruelty towards the animal world is a reproach on human nature; it is repugnant to every precept of religion, benevolence, and humanity. The depravity of human nature, its strong tendency to evil, is strikingly manifest when we reflect, that though the infant handles the soft fur of the cat with delight, and is no less pleased with the gambols of the kitten, and is delighted with the bushy tail of the dog, and other domestic animals that come under his observation; yet as soon as he emerges from infancy, these animals become the objects of his torment. The mutilation of insects by the boy who has scarcely begun to

prattle is regarded with the most pleasurable sensations. Cowper says,

"I would not enter on my list of friends
(Tho' graced with polish'd manners and fine sense,
Yet wanting sensibility) the man
Who needlessly sets foot upon a worm.
An inadvertent step may crush the snail
That crawls at evening in the public path;
But he that has humanity, forewarn'd,
Will step aside, and let the reptile live."

This is the season of storms, the snow-drift and dark nights are exceedingly dangerous to the mariner approaching the coast. Shipwrecks sometimes occur upon our shores at this inclement season, when many an individual is consigned to a watery grave, causing the wife to mourn the loss of her husband, or the mother her only son. The seaman at this season has to encounter various difficulties, and to endure privations, hardships, and misfortunes; his vessel is the sport of every wind, and he is sometimes carried he knows not whither. In the winter of 1835, in the month of February, during a voyage from Lisbon to Carbonear, the brigantine Elizabeth, belonging to the late firm of Tocque and Levi, fell in with a schooner owned by Mr. Bent of Annapolis, Nova Scotia, out thirty-two days from Bermuda, bound to Halifax. About a week after the schooner had left Bermuda, the captain, in a fit of insanity, jumped overboard, and was never seen after. There being no other navigator on board, they were drifted about at the mercy of the winds and currents until they came within sight of the south coast of Newfoundland, which they supposed to be

New Brunswick. Here, at their own request, they were taken in charge by Captain Roberts of the *Elizabeth*, and brought to Carbonear, where they remained all the winter, and sailed early in the spring for Nova Scotia, where they arrived in safety. The loss of many vessels which have never been heard of is probably owing to accidents similar to that which has been related.

Winter is the season to call forth the sympathy and charity of the benevolent. Numbers are now thrown out of employment, and are destitute of the common necessities of life. Many an individual who had been nursed in the lap of luxury, pinched with cold and hunger, now stretches his withered arms over the dying fire, whilst his ragged garments are insufficient to keep the wintry wind from piercing through his skeleton frame. To assist their suffering fellow-creatures is the duty of those whom God has blessed with the means.

The legislature gives a small annual grant for the suffering poor, and the influence of religion has raised many benevolent institutions amongst us. In this respect Newfoundland is far before some of the most refined nations of antiquity; for throughout the whole history of ancient Rome, even in the days of her greatest splendour, we do not read of a single charitable institution adorning her classic ground.

The following institutions for the relief of suffering humanity are now in full and vigorous operation. In St. John's are the Benevolent Irish Society (the oldest in the island), Orphan Asylum, Indigent Sick Society Factory, Dorcas So-

ciety, Mechanics' Society, British Society, Natives' Society, Scottish Society, and St. George's Society : at Harbour-Grace, the Benevolent Irish Society, and Mechanics' Society : at Carbonear, the Benevolent Irish Society, and Natives' Society : and at Trinity a Benefit Club.

In no part of the country is a charitable institution more needed than at Bonavista. Here poverty is wide spread, and exists in its lowest degree ; scenes present themselves calculated to awaken the deepest sympathy and commiseration. Here have I seen the aged widow, whose head was whitened with the frost of seventy winters, and who had seen better days, destitute of every earthly comfort ; and individuals in the meridian of life with families of naked and starving children.

The night was dark and the wind sighed in mournful accents around the house, when a person called to inform me, that poor old Corbon was dead. This, however, was not the case, as I visited him the following morning. I found him living in a miserable hut, full of holes and crevices, through which the winter storm whistled, driving the feathery flakes of snow about the wretched dwelling. This poor old man was without fire, lying upon a bed (if such it may be called) with a ragged blanket insufficient to keep the animal heat in his feeble and emaciated body. His only food consisted of a solitary cake of hard coarse brown bread. For a considerable time he was quite unconscious of my presence, owing to a kind of stupor into which he had

fallen, from the effects of the cold and the want of proper nourishment. He informed me that he had been living in a better house than the one he now occupied, which belonged to his step-son; but rather than let him reside in it, this unfeeling and inhuman step-son levelled it to the ground! These are only a few instances among the many of the same kind that are to be met with in this part of the island.

"How many thousands at this very hour
 Feel the keen-pointed weapon of distress,
 Who little thought that his despotic power
 Would thus involve their lives in wretchedness!
 Perhaps some mother mourns her dying son,
 The only prop of her declining age:
 Some weeping orphan's last, last parent gone,
 Thrown lone and helpless on the world's rude stage.
 How many on the bed of sickness weep,
 While the pale moon o'er heaven's blue azure reigns;
 No hand to smooth their pillow, or to keep
 The night-watch, and to soothe their easeless pains.
 Though I, thank heaven, from such distress am freed,
 Yet thus to muse on theirs, is deep distress indeed!"

One of the greatest acts of benevolence that ever Newfoundlanders were the objects of, occurred in the winter of 1816. On the 12th of February, a most destructive fire desolated a great part of the town of St. John's. The property destroyed is said to have amounted to more than £100,000 sterling. When the intelligence of this calamitous event reached the city of Boston, a deep and powerful sympathy was excited among her citizens for the destitution of 1500 human beings, left homeless and penniless amid the frost and storms of a Newfoundland winter! Burying in oblivion the recollection that the year previous the two

countries were hostile to each other, and regardless of the disputed right to fishing on the Banks, which right America wished to claim, but Britain was unwilling to concede, the noble and disinterested citizens only remembered the claims of their suffering fellow-creatures upon their hospitality. A vessel was immediately loaded with provisions, which were sent to be distributed gratuitously among the distressed inhabitants of St. John's, where she arrived in safety and delivered her valuable cargo. For a vessel to brave the storms of a winter passage to Newfoundland at that time, was considered a most daring and hazardous enterprize. In the following year, 1817, on the night of the 7th of November, another immense fire broke out at St. John's, and in nine hours destroyed thirteen mercantile establishments (well stocked with provisions) and one hundred and forty dwelling-houses. The estimated value of the property thus destroyed was £500,000. This distressing calamity was succeeded by another, on the 21st of the same month, when fifty-six more houses, besides stores and wharves were consumed. Since this period St. John's has been visited by several smaller fires. In 1839 a block of houses on the north side of Water-street, comprising fifteen tenements, were entirely consumed; and in 1840 the exchange and other buildings were destroyed. In 1832 the greater part of the town of Harbour-Grace was consumed by fire,* and in 1820 a most

* This year (1844) Harbour-Grace was visited by another fire, when twenty-five houses were burnt, and property to the amount of £30,000 destroyed.

destructive conflagration laid waste a great portion of the town of Carbonear. In the winter of 1817 great distress prevailed, in consequence of the great fires; and owing to the failures of the crops in various parts of Europe, the usual quantities of supplies had not been imported in the fall; and the merchants seeing the great improbability of receiving any immediate returns for their goods, circumscribed the accustomed credit system. Numbers of the inhabitants, rendered desperate by want, began to break open the stores. Volunteer companies were immediately embodied and armed, to prevent further depredations, and committees of relief were formed to issue small quantities of food at stated periods. This winter is universally designated by the old inhabitants of Conception Bay as the "Winter of the Rals."

On the 13th of January, 1842, an Agricultural Society was established, under the patronage of his Excellency, Major General, Sir John Harvey. It has in connexion with it a small museum, consisting of collections of natural history. This society is but yet in its infancy. Nursed and supported by the fostering care of the Colonial and Imperial Governments, it will give a mighty impetus to agricultural pursuits, and be the means of giving a new aspect to the country.

At a ploughing match held in connexion with the Agricultural Society this year (1844) his Excellency, Sir John Harvey, spoke as follows:—

"Gentlemen,

"I meet you here upon this occasion with peculiar satisfaction. The increased and increasing interest which is so generally manifested, in respect to agricultural pursuits, the improvements which are every where in progress in our roads and communications, and the daily increasing facilities which are thereby afforded to those pursuits, together with the rapid rise which is, consequently, taking place in the value of landed property—these, Gentlemen, are among the sources of that satisfaction which I have so much pleasure in now expressing. But these circumstances, gratifying and encouraging as they undoubtedly are, must, nevertheless, be regarded as merely the means to a great end, viz. the welfare and happiness of the inhabitants of Newfoundland, an object which it has been alike my duty, my privilege, and my ardent desire, to promote by every means in my power.

"Gentlemen,—almost from the first moment of my arrival in this island, my eyes were opened to the fact of which the inhabitants themselves evidently appeared not to be sufficiently aware, viz. that it possessed agricultural treasures, capabilities and advantages, as well of soil as of climate, which, if not unequalled, are yet certainly not surpassed by any of the surrounding colonies. And as the result of three years' experience, I will now read to you a short extract from a despatch which I have very recently addressed to Lord Stanley, and in which it has been my endeavour, in the discharge of my duty, to place before his Lordship my impressions upon a subject of so much importance to its inhabitants, as the capability of the soil of a colony which had heretofore been regarded as little more than a mere fishing station, to minister to the wants, to the comforts, and even to the profit, of those engaged in the prosecution

of the fisheries. After speaking in the despatch referred to of the increased value which must necessarily be conferred upon lands by the construction of good and practicable roads, in all colonies in which the soil is cultivable, I have said, 'With respect to this island (hitherto undervalued, as it appears to me to have been), there can be no doubt that the whole of those tracts designated (and depreciated by that designation) by the appellation of "*Barrens*" (merely because denuded of trees), are among the most fertile and productive soils in British America, the sections almost everywhere presenting to the eye from 4 to 6 feet of fine, light, **gravelly** soil, capable of producing luxuriantly every species of crop, except, perhaps, *wheat*, and requiring only the aid of artificial manures, and careful and judicious culture, to give good returns even in that species of grain; while in respect to all others, more especially grasses of every kind, including clover, vetches, and, I will add, flax, in oats and barley, turnips, potatoes, and in fact every species of "green crop," I have seen no country out of England and Egypt superior to it.'

"If what I have said, Gentlemen, be correct, wholly, or in part, it follows that of all agricultural implements, 'the Plough' is necessarily to us the most interesting and important. The admirable exhibition which we have upon this and former occasions witnessed of the vigour and skill of our Newfoundland ploughmen, in the use of this *weapon*, one so far more glorious than the sword of the warrior, in that it is employed in the subjugation of that which it was appointed to man to subdue, viz. the earth, from which he himself was formed, and from which by the mysterious will of the Almighty, it was appointed to him to derive his sustenance—leads me to the toast, and the aspiration with which I will conclude this brief address, viz. 'May

God speed and prosper the plough in this, and all other Christian lands.'"

In the winter of 1833, on new-year's-day, the first session of the Colonial Parliament was opened by Captain Sir Thomas Cochrane, the Governor, a representative constitution having been granted the previous year by His Majesty William IV. The elective suffrage was almost universal, the title to vote being the ownership, or possession, of any description of dwelling for one year; and the qualifications of a representative were, not having been convicted of any infamous crime, and occupying a dwelling as owner or tenant for two years immediately preceding the election. The island was divided into nine districts, which returned fifteen members to sit in the Assembly. The Council was composed of nine members, appointed by the crown, and legislating as a distinct House of Parliament. The charter invested the governor with the power of suspending any member of the Council, of assenting to, or withholding his consent from, any bill passed by both Houses of Parliament, and to prorogue, adjourn, or dissolve the same.

In the winter of 1841 the eighth and last session of the Local Parliament under this system terminated. It was dissolved by Captain Prescott, the then Governor, on the 26th of April, and in consequence of the riotous proceedings at the elections the constitution was suspended. In 1842 an act was passed by the Imperial Parliament for amending the constitution of the government of Newfoundland; the principal features

in which this measure differs from the old system are the following. The abolition of the Legislative Council as a distinct branch, and its amalgamation with the Assembly into one house. There is also an Executive Council distinct from the Legislative, for advising the Governor. The qualification of persons elected to serve as members in the Assembly is a net annual income of £100, or the possession of property clear of all incumbrances to the amount or value of £500. The qualification of voters being the possession of a dwelling house for one year. All the elections are simultaneous, being completed in a given time on the same day throughout the island. This act continues for four years only.

On Tuesday, January 17th, in the winter of 1843, His Excellency, Sir John Harvey, opened the first session of the General Assembly under the new form of constitution, with the following speech from the throne:

"Mr. Speaker, Honourable Gentlemen, and Gentlemen,

"The Imperial Parliament having, during its recent session, passed an act which has received the royal assent, and by which material alterations have been introduced into the constitution of this island, it has become my duty, to convene you in General Assembly, and to assure you of the earnest desire which I feel, that through our united exertions the affairs of this ancient and loyal colony may be so administered, under this new form of constitution, as to fulfil the anxious wishes of our benignant and maternal sovereign, by the advancement of the true interests of all classes of Her Majesty's subjects in Newfoundland. But before I proceed to

invite your attention to those measures which appear to me to call for prompt legislation, I deem it proper to remind you, that the constitutional act under which you are assembled is of a temporary character, being limited in its duration to the period for which provincial legislatures usually sit, viz., four years; and that its re-enactment may depend in some measure upon your own wishes and those of your constituents, but mainly upon the manner in which, after having undergone a fair trial, it may be found to promote effectual legislation, and thereby to counteract the evils arising out of the conflicts of opinion on the part of two distinct bodies, possessing separate and independent functions, which confessedly existed, and by which the best interests of Her Majesty's subjects in this valuable colony have been most injuriously affected.

"In the anxious hope that the amicable and unreserved interchange of opinions between all parties and all interests in free discussion, in a single chamber, may have the effect of promoting a better understanding, and lead to useful practical legislation for the benefit of the colony and the general interest, and assuredly not for the purpose of promoting any particular interest, still less for the object of affording a triumph to one party, or of inflicting mortification on any other—in this hope, and on these grounds, our gracious Sovereign has been induced to give her sanction to this temporary, experimental, and, as it is hoped it may prove, remedial measure.

"It has been justly observed, that 'reasonable sacrifices on the part of all, for the sake of public peace and tranquillity, are as necessary as the surrender by all of certain natural rights for the sake of social harmony.' If we apply this forcibly expressed axiom to legislative proceedings, we have clearly presented to us the only source from whence can flow that legislative harmony

from which is to issue the public good, and by which alone the blessings of our free and happy constitution can be fully diffused among all classes of Her Majesty's subjects in this ancient and loyal possession of the British Crown. Permit me, then, to invite you, laying aside the recollection of all past differences, cordially to unite with me in endeavouring to advance the objects common to us all—the general happiness and prosperity of Newfoundland—by allowing no other consideration to interfere with this our paramount duty, and by so exercising the functions and powers which the constitution has confided to us respectively, as to acquire the highest rewards to which we can aspire, the approbation of our sovereign, of our fellow-subjects, and of our own consciences. And here I would indulge in the expression of a sanguine hope, that the peaceable and orderly manner in which the constituency of this island have exercised their franchise during the late elections, may be regarded as an earnest of the harmony and good feeling which are about to pervade your deliberations, and to mark your legislative proceedings.

“Before I lay before you my suggestions as to the objects to which it appears to me that a portion of the provincial revenues may be most beneficially applied, it is my pleasing duty to offer to you my heartfelt congratulations upon that auspicious event which has crowned the hopes and wishes of the nation, since the last meeting of the legislature of this island. I refer to the birth of a male heir to the throne—an event which leaves to Her Majesty's loyal subjects little to apprehend in connexion with the happy prospect of the secure succession to the crown of these realms of the issue of their beloved Queen; and, in the fervent gratitude which pervades every British heart towards that protecting Providence which has continued to shield the

precious life of our sovereign from the blow of the assassin, Her Majesty's loyal subjects in this portion of her dominions have, I know, warmly participated.

"Mr. Speaker, Honourable Gentlemen, and Gentlemen,

"Together with a detailed account of the actual state of the public revenues, including all the receipts and disbursements which have taken place since the last meeting of the Provincial Legislature, I have directed that a separate account be laid before you of the various sums of which I have taken upon myself to order the payment since my arrival in Newfoundland; and as the circumstances which have appeared to me to render the assumption of this responsibility on my part an act of imperative duty towards the Queen's subjects in this colony must be fully within your knowledge, it may only be requisite for me to say, with reference to those payments, that I have, as a general rule, confined myself to such items respecting which there appeared to have existed no differences of opinion between the Council and Assembly. With you, therefore, it rests to decide how far it may be expedient or just to exonerate me for having, under such circumstances, taken upon myself to give effect to an act of legislative appropriation which had unhappily been left unperfected by the usual and necessary constitutional forms.

"I am happy to be enabled to inform you, that up to the period of the expiration of the 'Revenue Act,' the state of the public revenues and the general financial condition of the colony afford grounds of reasonable satisfaction. But I recommend to you to take into your *immediate* consideration the means by which the very heavy deficiency, arising from the unavoidable discontinuance in the collection of Colonial Duties since the first day of July last, and amounting, as

appears by the statement which will be laid before you, to not less than £20,000, may be repaired, so as to press with least weight upon the community; whether by passing an act to continue or to revive the expired Revenue Act, by giving a retrospective operation to its provisions, as recommended by the Right Hon. the Secretary of State for the Colonies, or by the imposition of such an increase of duty on certain articles of consumption, as may hold out a reasonable prospect of replacing the deficiency by raising the general amount of the public revenue for a given period. To any well-considered measure for effecting the important object in view, I am ready to give my assent; and in reference to this subject, I recommend to your attentive consideration the act recently passed by the Imperial Parliament for establishing a revised tariff of duties, to be levied on certain articles of British produce and manufacture, from and after the 5th day of July, 1843, of which a copy will be laid before you. The renewal of such other temporary acts as may have expired, or be about to expire, will also receive your early attention.

“The estimates which will be presented to you of the sums which are required for the public service of the colony, have been framed in accordance with the instructions of Her Majesty's Government, by which the expenditure is required to be brought strictly within the anticipated amount of the revenue, and are therefore less in accordance with the actual exigencies of the colony, more especially with respect to roads, than with its present available means. Of the latter I confidently anticipate a regular and progressive increase, which will, I doubt not, be attended by a corresponding liberality on your part in making increased provision for the

several objects of the public service, to which I will now proceed to draw your attention.

"In giving a well-merited precedence to the important subject of 'Education,' I will confine myself on the present occasion to repeating my often-expressed and deep-felt conviction, that by no exercise of our legislative functions can we confer so great a boon upon the rising generation, as by bringing within the easy attainment of the youth of every class of the community the blessings of useful education, based upon sound principles of religion and morality. Such a foundation is in reality all that is necessary to enable any British subject, possessing integrity, industry, sobriety, and ordinary abilities, to raise for himself, with the blessing of Divine Providence upon his endeavours, such a superstructure of happiness and independence as is attainable under no other form of constitution in the civilized world. Entertaining these views, and upon these grounds, I indulge a confident hope, that you will not only cheerfully vote the sums necessary to enable the educational institutions of the colony to continue their operations, but will be found ready to place increased means of usefulness at their disposal, whenever the state of the provincial revenues may enable you to do so, with a due regard to other objects. And here I would express a confident hope, that this important colony will not long be allowed to remain without the advantage of such a collegiate or academical institution, as may afford to its youth the means of acquiring instruction in the higher branches of education, without having to seek them, at great expense and inconvenience, in Europe, or in the neighbouring states or colonies.

"Upon the subject of roads, of agriculture, and of immigration generally, I know not that I can place my ideas more forcibly before you, than by inviting your

attention to some observations having reference to those deeply interesting objects, which were addressed by me to a public meeting held in this city in January last, for the purpose of forming a society for the encouragement of agriculture, of which a copy will be laid before you, and which you will perceive from the copy of the despatch from the Right Hon. the Secretary of State, by which they will be accompanied, have obtained the approbation of Her Majesty's government. I would at the same time express my inmost conviction, that the subject is one which more closely connects itself with the future prosperity, happiness, and independence of Her Majesty's loyal subjects of Newfoundland, than appears to be generally supposed. And here I will not deny myself the satisfaction of recording this public declaration of my conviction, derived from such observation and information as a residence in the island of upwards of a year has enabled me to acquire, that both as respects climate and agricultural capabilities, Newfoundland, in many respects, need not shrink from a comparison with the most favoured provinces of British America. Its summers, though short, exhibit an extraordinary degree of vegetative power, which only requires to be duly taken advantage of; its winters are neither unusually long or severe, and its autumnal seasons are as open and fine as those of any of the surrounding colonies; and though the island generally does not abound in timber, yet amply sufficient is found for every useful purpose; and in point of rich natural grasses, no part of British North America produces greater abundance. Newfoundland, in fact, appears to me to be calculated to become essentially a rich grazing country; and its varied agricultural resources appear only to require roads and settlements to force them into highly

remunerative developement; but in a country where those treasures and capabilities are only partially found, it is obviously expedient that the ordinary rules of improvement should be departed from to suit its particular circumstances. Thus, in the original settlement of the timber-growing colonies, individual enterprise and improvement have generally preceded roads, which have been subsequently constructed for the purpose of connecting detached settlements with each other, or with navigable waters; but circumstanced as is this island, having few navigable streams, interior settlement can only follow explorations and surveys, and the construction of practicable roads of communication with the common highway, the 'sea.'

"In connexion in some measure with the preceding remarks, I would observe to you, that Newfoundland appears to stand alone among the western colonies of the British empire, in several very essential respects: 1st, That she is without practical roads of communication for connecting the various settlements of the island with the provincial capital, and themselves with each other; and 2dly., without a 'militia force' of any kind. So long as this unexampled state of things—more especially as respects the 'roads'—is suffered to continue, this colony must remain, what it would almost appear to have been designed to keep it—little beyond a 'fishing station.' Emigration to it, beyond the number of labourers required for the prosecution of that single pursuit, cannot be expected, no other encouragement being held out. But by opening up its interior by means of good roads and communications upon lines carefully surveyed and carried through lands—and it is known that such are to be found, capable of repaying the labourer or the settler, and therefore holding out inducement to that class of emigrants—you will, I have

elsewhere said, 'discover treasures which, though they may not offer in the first instance rewards so tempting and so immediately available as those of the surrounding deep, are nevertheless quite as essential to the prosperity of your island home as are the fisheries themselves.'

"While on the subject of 'roads,' I will remind you that several lines of cross and other roads, intended to connect the capital with the neighbouring out harbours and settlements, have been judiciously commenced, but in almost every instance have been left in an unfinished state for want of funds: these you will, I doubt not, concur with me in thinking should be completed at as early a period as may consist with our ability. And there are other lines of roads, to the importance of which I anticipate your concurrence with equal confidence, I refer to a communication to be made practicable for carriages at all seasons for connecting the provincial capital and the northern and eastern districts of the peninsular of Avalon, including the shores of Conception and Trinity Bays with those of St. Mary's and Placentia; as also that for completing the proposed coast road between St. John's and Trepassey. It must be wholly unnecessary for me to expatiate to you upon the great importance to the general interests of the island of such means of access to its western and southern coasts and bays, not only as facilitating inter-communication between many of its most valuable ports and settlements (with which there exists at present little other communication than by sea), but also with the sister colonies of British America, these ports being known to be accessible, particularly Trepassey, to vessels during the winter season, when those to the eastward are obstructed by ice. Of the line of road first adverted to, an exploratory survey has recently been made, which,

with the report by which it is accompanied, will be laid before you.

"With regard to the 'Militia Force,' although I am aware that there are circumstances arising out of the ordinary pursuits of the great body of the adult population of this island, which may be regarded as constituting essential points of difference between them and the population of other colonies, yet I confess myself unable to perceive any which ought to raise so remarkable a line of distinction as is exhibited by the unprecedented fact of the entire absence in Newfoundland of that constitutional force which presents so prominent and interesting a feature, which exhibits so much of loyal enthusiasm, which constitutes a source of such well-founded confidence, and inspires such a spirit of laudable pride and satisfaction in every other colony of Her Majesty's dominions with which I am acquainted, as its 'Militia.' Nevertheless, in suggesting to you to relieve your island and its hardy and loyal population from the imputation which at present attaches to it on this subject, by passing a Militia law, it is far from my wish or intention to recommend, because the circumstances of the colony do not appear to call for it, that its provisions should be at all of a stringent or onerous character as respects the periods of musters, trainings, or inspections, which might be made very infrequent, and the act be so administered as to avoid any material interference with the ordinary avocations or occupations of the people. All I would propose, in the first instance, is such a bill as would merely effect the organization of a Militia Force by the enrolment of all the male population of the island, within certain ages, for the defence or protection of the colony in cases of foreign invasion or internal commotion, with power to the governor for the time being to call upon their

services in either of these cases of emergency. I am not in ignorance of the fact, that the inhabitants of this island are very generally accustomed to the use of fire-arms, and I am, therefore, satisfied, that a very short training would be found sufficient to put them upon a full equality with the military force of any other colony; but in order to be placed in a state of necessary preparation for such training, it is requisite that the head of the government should be empowered by law to form them into battalions and companies, and to appoint officers, and one or more days in the year for muster, &c. The details of the proposed measure will, however, be best explained by the draft of a bill which will be laid before you, and to which I invite your favourable attention.

“The entire absence of steam vessels of any kind in this island must be regarded as another circumstance in which Newfoundland exhibits a marked distinction from the other colonies of this hemisphere. Its legislature has, I know, with considerable liberality sanctioned the application, from the colonial funds, of a sum of one thousand pounds per annum, for a term of three years, in aid of the conveyance, by steam vessels, of Her Majesty’s mails to and from Halifax, which grant has been met, in a spirit of corresponding liberality, by the legislature of Nova Scotia, by one for the same object, and for the same period, of half that amount; but it is much to be feared, that without some extension of these grants, or some spirited exertions on the part of individuals or associations, the very desirable object of quick and regular communication with the mother country and the neighbouring colonies must remain unattained, and this island continue to suffer by its exclusion from any participation in those benefits so largely enjoyed in this

respect by all the rest of Her Majesty's North American possessions.

"The liberality which has usually distinguished the votes of the legislature for the support of the poor, satisfies me that I have only to call your attention to the necessity of a provision for the widows, orphans, and impotent and aged persons, who are comprised in what is termed the Permanent Pauper List, to insure the extension of relief to those sufferers.

A statement of the sum now due on this account, as well as for the indigent sick in the hospital, and including that class of our fellow-beings whose claim upon all our sympathies must ever be regarded as irresistible pauper lunatics, will be laid before you.

"Before closing this part of my subject, I feel myself impelled also to propose, that a small sum should be placed at the disposal of the executive, to be applied, in the event of any favourable occasion presenting itself, to the solution of that most interesting problem, the continued existence or otherwise in this island of that unhappy and deeply to be commiserated class of beings, its aboriginal inhabitants.

"With reference to the great staple of the island, its 'fisheries,' I would submit to you whether the existing state of the laws respecting the recovery of the wages of fishermen and seafaring men employed in that pursuit might not be made the subject of wholesome revision. The rights and privileges of this valuable class of men, as well as those of their employers, ought, in my opinion, to be so strictly guarded and so clearly defined by legal enactment, as to render redress on either side a matter of cheap and easy attainment; and more especially is this desirable, with a view more effectually to promote, and more closely to cement that union of interests which ought ever to subsist between the fisher-

man and those by whom he is employed and supplied. I would further observe, that in a colony where there cannot as yet be expected to be found any considerable numbers of educated resident gentlemen and respectable individuals, who can conveniently afford to devote the whole of their time and attention gratuitously to the discharge of those duties which attach to the magisterial and ministerial machinery of the public service, it must evidently consist with the public interests to have recourse to the only mode by which this evil can be remedied. To neglect such a course must entail upon the inhabitants the injurious consequences which flow from a defective administration of the laws, and must often amount to a denial of justice. On these grounds I propose to you some additional provision for an increase of the stipendary magistracy and of the police establishment, as well in the provincial capital as in the rural districts and out-ports. And in connexion with this subject I invite you to take into your consideration, whether by such increase, coupled with an extension of the powers of the magistrates in some of the more remote sections of the island, it may not be found practicable to relieve the colony from the great, and as appears to me, unnecessary expense, occasioned by the present 'Circuit Courts.'

"With regard to bounties, or other encouragement to the whale, seal, or any other branch of fisheries, you will yourselves be most competent judges, both of the expediency of granting such encouragement and of the amount; but I would submit to your patriotic consideration with respect to 'agriculture,' that without some legislative aid in the commencement of its operations, the 'society' which has recently been formed with the object of promoting that important branch of the provincial interests, will be found unable to overcome the prejudices

and difficulties against which it will have to contend. I would, therefore, propose to you to make a moderate grant in aid of this Association, to be continued for such a period as may be deemed sufficient to enable the colony to form a correct judgment as to the amount of benefit which it may be likely to render to its agricultural interests. The disposal of this fund, I would propose, should be left under the control of the society itself, which, including, as it does, individuals of the highest respectability in the island, who stand before the public pledged to use their utmost endeavours to carry out the views which led to the formation of the association, offers the most satisfactory guarantee for its prudent and useful application.

"On the subject of 'Bounties,' I would further submit to your consideration, whether it might not consist with a wise policy to give all due encouragement to native talent and enterprise as respects so useful a branch of manufacture as the construction, in this and other parts of the island, of ships and vessels, not only suited for the prosecution of the deep-sea fisheries, but capable of conveying the manufactured produce to any part of the commercial world. Such an encouragement would, as appears to me, be in strict accordance with that principle which every country should keep steadily in view, of increasing the amount of the export of its staple commodities, especially in a manufactured shape, by every means in its power. Thus, in corn and timber growing colonies, the benefit of manufacturing the grain into flour and meal, and the timber into deals, boards, and ships for exportation, should, if possible, be confined to the inhabitants of such colonies; and though this island has at present neither surplus grain nor timber to export, yet it has recently shown to the inhabitants of this port that vessels of sufficient size, of strong fabric,

and beautiful model, may be successfully constructed by 'native' talent, duly encouraged, and of timber of 'native' growth.

"A bill for regulating the sale of waste land 'of the crown' in this colony will be laid before you; but you will be aware that the provisions of such a bill must remain, in a great measure, inoperative in this island, until such 'surveys' shall have been executed as may enable the Surveyor-General to describe and to estimate, with a due degree of accuracy, the lots which may be applied for or offered for sale, and the general circumstances affecting them. For such surveys, in connexion with those for certain lines of roads already adverted to, due provision should be made. In reference to this subject, it is my intention to propose to Her Majesty's government to sanction an arrangement by which all persons of British origin, who may have been in the actual occupation of lands, though without license, lease, or grant for a given period, shall be enabled to acquire a title to such lands, on such conditions as may be considered just and reasonable, with reference to the circumstances of each case, and with a view to secure them and their heirs in the free enjoyment of the improvements which they may have made thereon.

"Upon a subject of so much importance as the administration of justice in the supreme court of this island, upon terms as moderate as may consist with the various professional rights and interests involved, I have directed to be laid before you a despatch from the Right Hon. the Secretary of State for the Colonies, inviting your consideration of the subject, with a view to submit to Her Majesty's government, by bill or otherwise, such propositions for the limitation of those powers which, at an earlier period of the history of this colony, it was deemed expedient to confer, by charter, upon the chief and other judges

of the Supreme Court, of making 'rules,' which are in effect 'laws,' affecting the public revenue, by regulating the amount of fees to be received in that court. Copies of the existing 'Rules' of Court and Tables of Fees, as well as of the two new rules, the subject of Lord Stanley's despatch, will be laid before you, and the important points involved will, I doubt not, be considered by you with a due regard as well to the interests of the suitor as those of the legal profession.

"The liberty and privileges of the subject are so deeply involved in the equitable provisions and due administration of the laws affecting 'Bankrupts,' as well as those for the regulation of prisons, that I feel it an imperative part of my duty to invite your attention to those important objects of legislation, with a view to endeavour to extend to this island the full benefit of the many wise and humane regulations which have been introduced into the acts of the Imperial Parliament on these subjects.

"Although I am impressed with a conviction that nothing but an Act of 'Incorporation' can effectually confer upon the city of St. John's all those benefits which the inhabitants of the commercial capital of this colony, whose annual 'exports' amount, on the average, to little less than a million sterling, ought to enjoy, yet I will not abstain from offering (by message) a few observations and suggestions for its improvement, particularly as some of the improvements suggested can perhaps only be effected by a legislative enactment.

"There is yet another subject to which I deem it my duty briefly to advert, viz. the deficiency which exists in this colony of a suitable building for holding its legislative sessions; and I would suggest to you to combine with the consideration of this subject that of the requisite accommodation as well for the supreme court of judica-

ture, as for all the principal offices of the legislature and of the government, including places of secure deposit for the public records of each department. It has been suggested, that the building at present occupied as a residence by the queen's representative would afford ample space for all these purposes, and that the most economical measure, as respects the colony, might be for the legislature to address Her Majesty's government, for the consent of the crown to such an appropriation of that building, upon condition of a suitable residence being erected by the colony for the governor. Concurring in the opinion as to the advantage to the colony with which this arrangement would be attended, I shall be found ready to support, by my recommendation, any proposition which you may be induced to address to me to this effect.

"Mr. Speaker, Honourable Gentlemen, and Gentlemen,

"I am well aware that I have considerably exceeded the limits to which it is usual to confine addresses of this nature; but if, upon this, the first occasion of my meeting you in provincial legislature, I have been induced to give free expression to some of the views and opinions which I have been led to form since my arrival in Newfoundland, I indulge the hope, that you will at least see in this proceeding the evidence of an anxious desire on my part to identify myself with all its interests, and to do all that may depend upon my position, as the representative of a benignant and maternal sovereign, to co-operate with you in promoting them, and in endeavouring to secure to Her Majesty's loyal subjects in this island the fullest measure of benefit which their new constitution may be found capable of conferring upon them. And although the views and suggestions which I have laid before you may appear too comprehensive for the present means of the colony, and quite incapable of being realized otherwise

than very gradually, yet I have not, on that account, deemed it the less to consist with my duty, to avail myself of an occasion which may be regarded as constituting a new era in the political history of Newfoundland, for the purpose of placing upon the records of its legislature such suggestions as a long acquaintance with the British American provinces has enabled me to offer, for effecting those improvements in the condition of this island, which, by tending to develope its varied resources, appear to me to be alone wanting to place it upon a footing with the most favoured of those provinces; and which may, I trust, supply a motive to its legislature to endeavour to raise the revenue of the island to as high a point as may be considered consistent with the interests of its inhabitants, for the purpose of being applied to objects of so much general importance.

"In conclusion, I would remark that to *us*, as separate, co-ordinate, and independent branches of the provincial legislature, is respectively confided the conservation of the rights of the people, and of the prerogatives of the crown, principles which are so beautifully blended in our admirable constitution, that the latter cannot be infringed without a violation of the former. Our relative duties, therefore, are rendered plain and easy; and while we shall always be found ready to co-operate in the endeavour to reform any acknowledged abuse, we shall feel it to be as much at variance with our duty to our sovereign, and to Her Majesty's loyal subjects of this colony, to acquiesce in any measure which may appear to us to be inconsistent with any acknowledged constitutional principle, as it would be to sanction any infraction of the known laws of the land. I would finally record my conviction, that by no other course of proceeding than that which has been the object of the preceding observations and suggestions to urge upon your consid-

eration, can the loyal inhabitants of this ancient possession of the British crown be so effectually rescued from the imputation which it has been sought to affix upon them, of being less fitted than their fellow-subjects of the neighbouring provinces for the due exercise of those privileges which are conferred by the usual representative form of constitution.

"If any material point to which I may have omitted to advert should arise or suggest itself in the course of the session, it shall be made the subject of a communication with you by message; and I feel that I cannot close this lengthened address in a manner more in accordance with my own feelings, as well as with my sense of public duty, than by inviting on your part the most free and unreserved communication with me, whenever you may be of opinion that the advancement of any question connected with the public interests can be thereby promoted or facilitated."

TEMPERANCE.

"If death were nothing, and nought after death;
 If when men died, they ceased to be,
 Returning to the barren womb of nothing,
 Whence first they sprung;—then might the debauchee
 Untrembling mouth the heavens;—then might the drunkard
 Reel o'er his full bowl, and when 'tis drain'd,
 Fill up another to the brim, and laugh
 At the poor bugbear Death;—then might the wretch
 That's weary of the world, and tired of life,
 At once give each inquietude the slip,
 By stealing out of being when he pleased,
 And by what way, whether by hemp or steel:
 Death's thousand doors stand open."

BLAIR'S GRAVE.

IF we wish to extend the narrow span of this mortal life, and pass through the world respectably, let temperance be our physician and guide, for she carries health and long life in one hand, and competency and honour in the other; disease flies affrighted at her presence, and repentance never visits her abode. By temperance I wish my young friends distinctly to understand, that I mean *total abstinence* from all that intoxicates. I believe it is now generally understood that temperance and total abstinence are synonymous terms. I know of no better way of recommending temperance than by pointing out the evils of intemperance.

This is a frightful monster, a hydra with many heads. The first head which presents itself on this hydra, is loss of reputation, and the increase of r uperism and crime. A man no sooner becomes the slave of intemperance, than he begins to neglect his occupation. The consequence is, if he has no money his credit is stopped, and he becomes reduced to a state of beggary, and in many instances theft has been resorted to in order to supply the wants of his starving family. Another of these heads is the loss of health, of conscience, and of the fear of God. Look at the drunkard's swollen face, his burning eyes, ready to burst from their sockets, and his quivering frame ready to sink into the jaws of death; what a host of diseases wait upon him to hurry him to his long home!

"Fever with cheek of fire;
Consumption wan; palsy, half warm with life,
And half a clay-cold lump; joint-tott'ring gout,
And ever-gnawing rheum; convulsion wild;
Swoln dropsy; panting asthma; apoplex,
Full-gorged. These, and a thousand more,
Horrid to tell, attentive wait."

Some of the most eminent physicians declare that the greater part of the diseases which attack the human frame, originate in the use of intoxicating liquors. Speaking of the hereditary influence of drunkenness, Dr. Trotter says, "The morbid juices of the parent are transfused into the veins of his progeny, and thus a feeble offspring is forced into existence, pregnant with its own destruction." "No person," says Sir Astley Cooper, "has a greater hostility to dram-

drinking than myself, insomuch, that I never suffer any ardent spirits in my house, thinking them evil spirits; and if the poor could witness the white livers, the dropsies, the shattered nervous systems, which I have seen as the consequence of drinking, they would be aware that spirits and poisons are synonymous terms."

Another medical writer says, it is "a disease far more destructive than any plague that ever raged in Christendom, more malignant than the burning typhus, the loathsome small pox, the cholera of the east, or the yellow fever of the west; more loathsome and infectious than all of them together, with all their dread array of suffering and death united in one ghastly assemblage of horrific and appalling misery;" and the following declaration is signed by thirteen physicians and fifty-three surgeons of Birmingham: "Being of opinion that the habitual use of intoxicating liquors is not only unnecessary, but pernicious, we have great satisfaction in seconding the views of the temperance society, by stating our conviction, that nothing would tend more to diminish disease, and improve the health of the community, than entire abstinence from the use of intoxicating liquors; to the use of which so great a portion of the existing misery and immorality of the lower orders amongst the working classes, is attributable."

Conscience, which used to act as a faithful monitor, is by the intemperate man rocked into silence; he turns his back upon the means of grace, desecrates the sabbath to the most unhal-

lowed purposes, and curses the minister whose faithful ministry he was accustomed to attend, and God and religion are hardly ever more thought of than if they had never been heard of.

The next head that appears on this hydra, has the face of insanity and murder. O! how intemperance prostrates the intellect!—that mind which could soar on the pinions of contemplation, and investigate the heavenly bodies as they roll in magnificent grandeur over the immensity of space, calculate their periodical revolutions, penetrate the secrets of nature, and inform us when there should be eclipses of the sun and of the moon; that mind which poured from the pulpit the most powerful strains of solemn eloquence, beseeching sinners to be reconciled to God; that mind which at the bar charmed and captivated the listening auditors; that mind which successfully directed the most complicated machinery of commerce; that mind which could write the history of its own formation, invent various machinery conducive to its happiness, and rear piles of architecture withstanding the storms of a thousand winters—this mighty mind is ruined, these astonishing faculties are prostrated and laid in the dust by that fell monster, Intemperance. Hundreds die through *delirium tremens*, and many end their days on the scaffold, through intemperance.

It has been asked, "Which is the greatest crime—drunkenness, adultery, or murder?" The reply has been, "Drunkenness, because it leads to the perpetration of the other two."

Dr. Crawford says, "that of the 286 patients

now in the Richmond Lunatic Asylum, Dublin, at least one-half have become insane in consequence of the abuse of ardent spirits ; and I know that the same has been observed in the other public lunatic asylums in Ireland. Several of these have been driven to the perpetration of the most horrible crimes, such as the murder of a father, a wife, a child." A late American writer says, "Of two hundred murders committed annually in the United States, where has one been known but under the influence of the intoxicating cup? And of the twenty thousand criminals who have been thrown into our penitentiaries, some for crimes whose very rehearsal makes our blood to curdle, few can be found who have not been stimulated to their ferocious deeds by alcoholic influence."

It is said there can be no harm in the temperate use of liquors, but the experience of thousands proves that it is from the temperate use of them all the evils result. No individual becomes a drunkard all at once ; it is by indulging in the moderate use of spirits that the pernicious habit is acquired. Intemperance steals upon us by slow and imperceptible degrees.

It is a truism which requires no argument, that the individual who abstains from the temperate use of intoxicating liquors will never become a drunkard. Palliative and half-measure principles have been tried again and again, but never could succeed in reclaiming the intemperate. There is no safety, then, but in the ark of total abstinence.

A minister with whom I am well acquainted, and who for a number of years resided in Nova Scotia, informed me that whilst living there, he knew a respectable man who carried on a large and profitable business as brandy merchant. In the course of a few years his eldest son became a regular and confirmed brandy-drinker, until nature, through its influence, became exhausted, and he sank into a premature grave. The father, seeing the awful consequences of the sale of brandy in the death of his son, banished the brandy from his warehouse, and became wine merchant. He had not long commenced this new business, before his second son began to indulge freely in the use of the "generous wine," until he fell a victim to its destructive tendency, and died also. The father, reflecting on the loss of his second son, resolved to do away with the sale of wine, and immediately commenced the sale of malt liquor; but strange to say, after having been warned by the death of his two sons, himself became addicted to the use of the last-mentioned article, and advanced by degrees until drunkenness terminated his existence. His establishment was broken up, and the remainder of his family left penniless and wretched. The father and sons doubtless acted upon the principle, that moderation was safe. From this instance we see there is no remedy but in total abstinence. Had these three individuals been teetotalers, such misfortune could never have befallen them.

One of the most insidious and delusive cases

of the influence of the small, the moderate dram, that ever came under my observation, was the following. I knew a person, a professor of religion, and a man of the most respectable standing in society; but the temperate use of spirits had acquired such a complete ascendancy over him, that he publicly confessed his inability to engage in the hallowed and sacred exercise of prayer without the stimulating influence of spirits. He was affectionately warned, time after time, of the dangerous and fatal tendency of such a practice; but the baneful habit had become so deeply rooted, that he laboured under the strong delusion as to argue, "that whatsoever entered the body could never defile the soul;" but when the following passages were cited to him—"The kingdom of God is not meat and drink, but righteousness, and peace, and joy in the Holy Ghost;" "It is good neither to drink wine, nor to eat flesh, nor anything whereby thy brother stumbleth, or is offended, or is made weak;" "Wherefore, if meat make my brother to offend, I will eat no flesh while the world standeth, lest I make my brother to offend;" "Be not deceived, drunkards shall not inherit the kingdom of God;" "Woe to them that drink wine in bowls;" "Beware, I pray thee, and drink not wine nor strong drink;" "Woe unto them that rise up early in the morning that they may follow strong drink"—he said, "If I am to perish, I must perish; I cannot give up the use of liquor." He became a drunkard, and was expelled from church membership.

You, my young friends, are the materials of

future generations, and it depends on you, under God, whether the next generation shall be teetotalers or drunkards; whether the rum puncheon shall be banished from our shores, or the deadly poison continued to be imported.

If all would come to the noble resolution of the American captain whom I saw some time ago, spirits would soon cease to be imported into this colony. He informed me, that after having taken on board his vessel about two-thirds of a cargo, he found that the remainder consisted of barrels of rum. Being part owner himself, he resolved not to take it on board, and came to this country, from Boston, with only two-thirds of a cargo. He said, "that hearing Newfoundland was a rum-drinking country, I could not, without a violation of my conscience, think of bringing so many devils to let loose upon its inhabitants." He informed me, that hardly any vessel which carried liquor for the use of the ship could obtain freight in an American port. This is not to be wondered at when we think of all the shipwrecks that have been caused by its use.

I well remember, a few years ago, having taken passage at Bristol in a vessel bound to Newfoundland; that after getting down to Cumberland Bason, every man left the vessel in order to indulge themselves in the use of malt liquor, though they had previously taken too much of that pernicious beverage. On his way from the vessel to the street, one man, barefooted, climbed up a large chain suspended from a wall, supposed to have been a perpendicular height of fifty feet.

Knowing that he was under the influence of liquor, we expected to have seen him dashed to atoms, ere he ascended half way, but Providence preserved him to reach the summit with his feet lacerated in a shocking manner. I was now solely in charge of the vessel. After waiting for several hours the captain came on board in a state of intoxication; and after another hour's delay we succeeded in getting all the sailors on board; shortly after which came the pilot with his men, and got the vessel out of the Bason, which was no easy task amid a crew of drunken men. While passing down the river, the captain and one of the sailors fell fighting; two more were under the bowsprit, holding on the martingale with their hands, and their feet nearly touching the water; another was hanging by a rope over the side of the vessel; while another was standing on the forecastle, uttering the most horid oaths and imprecations on the passengers of a steam-packet just then passing by. We were now obliged, with as little delay as possible, to hoist out our boat in order to save those men from drowning who were suspended from the martingale and over the side of the vessel, which we happily succeeded in doing, and we placed them on board in safety. But this was not the worst: after getting about quarter passage, the captain discovered that through his intemperance he had neglected putting more provisions on board than was necessary for half passage. We were now obliged to go on an allowance of one biscuit a day per man; and to add to our calamity, about a week after, it was

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found that three of our largest casks of water had leaked out. We were now reduced to one biscuit and half a pint of water each, in twenty-four hours. The sailors began loudly to complain and threaten the captain, and in order to appease their anger he broached a cask of rum, and to each man he daily apportioned three half pints, which almost produced daily intoxication. But in justice to the captain I feel bound to state, that he did not taste a drop of any kind of intoxicating liquor after we left Clifton, until we arrived in Newfoundland. The fifteenth day after being on an allowance, the joyful sound of "Land ahead," echoed through the vessel, the sight of which gladdened my heart, and led me to offer up my thanksgivings to that God who brought us over the vast Atlantic in safety. But the most melancholy part of my tale is yet to be told. After arriving at our port, and after the cargo had been discharged, part of the main hatch having been left open, and three of the sailors going on board in a state of intoxication, one of them (poor unhappy man!) stumbled, and fell through the open hatch to the bottom of the vessel—a lifeless corpse!

If the evil practice of allowing spirits for ships' stores were abandoned, it would be a great saving of property to the owners, as well as of human life. It is a prevailing opinion among those who frequent the sea in Newfoundland, that the working of a vessel during a cold stormy night could scarcely be performed without the aid of a glass of grog. It is, however, a well-known

fact to those who do not use liquors, that none can stand the deck so well as those who drink coffee or tea instead of grog. I have read an address, signed by one thousand captains of vessels, stating it to be their decided conviction, that intoxicating liquors, administered to seamen in the smallest quantities, instead of strengthening, weaken and debilitate the human constitution; that some of them had been going to sea from twenty to upwards of thirty years, and that, during the whole of that time, they never saw twenty-four hours wherein a kettle of tea or coffee could not be procured. The following is an extract from the journal of Captain Ross, during his second voyage to the arctic regions, where it is intensely cold; and if stimulants were necessary, we should suppose they would not be dispensed with in these polar latitudes :

“At seven we arrived at the ship, after an absence of nearly nine days, and found every thing right, and all in good health. If it is but justice to the men to say that they exerted themselves to the utmost, they deserve even more praise for a very different display of obedience and self-devotedness. As I was the only person who drank no spirits, and was the only person who had not inflamed eyes, I represented that the use of grog was the cause, and therefore proposed that they should abandon this indulgence; showing, further, that, although I was very much the oldest of the party, I bore fatigue better than any of them. There was no hesitation in acquiescing; and the merit was the greater, since,

independently of the surrender of a seaman's fixed habits, they had always considered this the chief part of their support. Thus we brought back all of this stock which had not been consumed the first day.

"It is difficult to persuade men, even though they should not be habitual drinkers of spirits, that the use of these liquors is debilitating, instead of the reverse. The immediate stimulus gives a temporary courage, and its effect is mistaken for an infusion of new strength; but the slightest attention will show how exactly the result is the reverse. It is sufficient to give men, under hard and steady labour, a draught of the usual grog, or a dram, to perceive that often, in a few minutes, they become languid, and, as they generally term it, faint; losing their strength in reality, while they attribute that to the continuance of the fatiguing exertions. He who will make the corresponding experiments on two equal boats' crews, rowing in a heavy sea, will soon be convinced that the water-drinkers will far out-do the others."

Intemperance is the prolific source of almost every physical and moral evil; it is deeply rooted and wide-spread.

"All noxious things,
Of vilest nature—other sorts of evils,
Are kindly circumscribed, and have their bounds:
The fierce volcano, from its burning entrails,
That belches molten stone, and globes of fire,
Involv'd in pitchy clouds of smoke and stench,
Mars the adjacent fields for some leagues round,
And there it stops. The big-swoln inundation,

Of mischief more diffusive, raving loud,
 Buries whole tracts of country, threat'ning more;
 But that too has its shore it cannot pass.
 More dreadful far than these"

Is intemperance, which has extended to every country, and marred the social, domestic, intellectual, and moral enjoyments of man; it has made its victims of the blooming youth, the man of "strong-built sinewy limbs," as well as of decrepitude and old age. "Its dominion is the dominion of appetite. And hence no age, no sex, no vocation, no people are strangers to its power. It has entered every village, and almost every family circle; infested the farm, the work-shop, the study, the counting-room, the court of justice, the hall of legislation, the pulpit; consumed its victims on the land and on the ocean, in polar seas and in torrid zones, in navies and armies, and cursed nations that have never known the light of the gospel or the way of salvation."

I knew a young man who rose from the position of a shop-boy to that of a book-keeper, and thence to the position of a merchant; afterwards he became gradually fond of the bottle; began to appear slovenly in his dress and person; then to neglect his business, until he eventually became a confirmed drunkard: his business, which was in a flourishing condition, began to decline, until it became broken up; he continued the victim of intemperance until his shattered constitution could hold out no longer; he was arrested by the hand of disease, and finally by the strong arm of death. The last time I ever saw him, he was suffering

from a most excruciating disease in his side, fully conscious of the awful state to which intemperance had brought him. "Ah," said he, "this affliction has been produced by my own evil conduct; but I hope I shall live to be a better man, and to warn others of the evil consequences of drink." About a month after this interview he breathed his last.

I was intimately acquainted with another young man, book-keeper in a mercantile establishment, who, by diligence and economy, after a servitude of seven years, was enabled to lay up the sum of two hundred pounds; he entered the marriage state, and with his wife received one hundred pounds more. Previous to this, however, he had grown fond of a glass; and now, finding himself in the possession of money to a considerable amount, he began to spend his evenings at the tavern, and to indulge freely in the use of spirits during the hours of business, until the employer he had lived with for so many years, was very reluctantly compelled to dismiss him. He now threw off the mask, which before had partly concealed his true character, and showed himself an open drunkard. He abandoned business of every kind, and made the tavern almost day and night his home, until the money he had been so many years accumulating, together with his wife's portion, was all spent. At length he was arrested in this course of iniquity; he fell into a consumption; and now, for the first time during his profligate course, he began to think of the misery of the past, and to contemplate the future with

horror. He would say, "Do you think there can be hope for one so guilty as I have been?" and when answered in the affirmative, he has said, "Ah, no! God will never receive me after having sinned against so much light and knowledge as I have." He continued lingering for two months, during which he sought the pardoning mercy of God, when his spirit returned to God who gave it, leaving a mourning widow and three children.

Passing by a house early one morning, I saw several individuals assembled around the door. I inquired what had happened, when a most appalling spectacle was pointed out to me. It was the cold and lifeless body of poor L—. His face presented a hideous appearance, being quite black and distorted from strangulation. This unhappy man had once moved in the most respectable circles of society, until liquor made him the common associate of drunkards. He had been attending a wedding the previous night, and left in a state of intoxication at an early hour. He succeeded in reaching a vacant house a short distance, over the steps leading to the door of which I saw him laying head downwards, a sad picture of the degradation of human nature, without a single relation in the world to drop a tear over his melancholy destiny.

"He died, and o'er his lifeless clay
No sigh was breathed, but there he lay,
Poor, friendless, and alone,
Without one sympathising tear;
No tender wife, or mother dear,
To hear his dying moan.

"He died—I think I hear his sigh,
 In every breeze which passes by,
 In the dread silence given;
 And there were none to watch, to pray,
 No soothing voice to point the way,
 Or lift his soul to heaven.

"He who had given his all away,
 Amidst the heartless, great, and gay,
 In midnight's cheerless hours,
 Breath'd his last sigh, and none to tell
 The import of his last farewell
 To such a world as ours."

But not only are sailors, clerks, merchants, and others addicted to the practice of strong drink; many ministers of the gospel also have often been ruined by it. I was well acquainted with two most excellent men who were ensnared by this insinuating vice, and who unhappily became the victims of private tipping. Another was so much the captive slave of the fiery liquid, that his expulsion from the ministry became absolutely necessary, and he has for many years been pursuing the avocation of a sober and industrious farmer in a distant land. "At this moment," says the Hon. and Rev. Baptist Noel, in a late sermon, "I know a minister who was eloquent, earnest, diligent, successful, beloved; he became, how I know not, the slave of this vice—his ministry is suspended, his reputation gone, himself the prey of deadly anguish! I know another, eminently endowed, who brought many souls to God, but is now an outcast from his friends, and has probably ended his ministry for ever."

In the life of the celebrated Rev. Robert Hall,

page 49, the following circumstance is recorded: "‘You remember Mr. —, Sir?’ ‘Yes, very well.’ ‘Were you aware of his fondness for brandy-and-water?’ ‘No.’ ‘It was a sad habit, but it grew out of his love of story telling, and that also is a bad habit, a very bad habit for a minister of the gospel. As he grew old, his animal spirits flagged, and his stories became defective in vivacity; he therefore took to brandy-and-water, weak enough, it is true, at first, but soon nearly half-and-half. Ere long he indulged the habit in a morning, and when he came to Cambridge, he would call upon me, and before he had been with me five minutes, ask for a little brandy-and-water, which was of course to give him artificial spirits to render him agreeable in his visits to others. I felt great difficulty, for he, you know, Sir, was much older than I was; yet being persuaded that the ruin of his character, if not of his peace, was inevitable unless something was done, I resolved upon one strong effort for his rescue. So the next time that he called, and as usual said, ‘Friend Hall, I will thank you for a glass of brandy-and-water,’ I replied, ‘Call things by their right names, and you shall have as much as you please.’ ‘Why, don’t I employ the right name? I ask for a glass of brandy-and-water.’ ‘That is the current but not the appropriate name; ask for a glass of liquid fire and distilled damnation, and you shall have a gallon!’ Poor man! he turned pale, and for a moment seemed struggling with anger; but knowing I did not mean to insult him, he stretched out his hand, and said, ‘Brother

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Hall, I thank you from the bottom of my heart.' From that time he ceased to take brandy-and-water."

Temperance societies are now the order of the day; yes, and of the night too. If on the wings of imagination we traverse the Atlantic and Pacific oceans, we shall find temperance societies stud-ding the shores of these vast oceans, resembling so many stars treading upon the shades of the evening, illuminating the countries in which they are, and shedding all around them an atmosphere of blessings. In Ireland, through the exertions of Father Matthew, millions have burst the bands which bound them to the car of drunkenness, and have become teetotalers; and England and Scotland have their hundreds of thousands identified with the cause. In Russia, Prussia, Sweden, Germany, and America, the cause of total abstinence is flourishing in a most astonishing manner.

There is a country whose shores have been pronounced iron-bound, whose surface presents a rocky and barren aspect, which is frequently drenched with rains, sealed up with frost, and covered with the drifting snow-storm. Its vegetable productions are scanty, its population thin and scattered, and have been represented as stretching out their hands to other countries for the necessaries of life. I refer to Newfoundland. We rejoice that total abstinence has advanced in a very rapid manner in this island.

A temperance society was in existence at St. John's, in 1835, the members of which were

allowed the temperate use of wine and malt liquor; but this society failed for want of being conducted on the total abstinence principle. In 1838 a total abstinence society was formed, which consisted for a long time of only nine members. In 1840 more public efforts were made, when the society began to increase. It had to struggle under great difficulties, in contending against the prejudices of the public, and a number of obstructions and discouragements. In 1841 the society numbered about 250 members. This society held several public meetings and festivals in aid of the cause; and put in circulation a number of temperance journals and tracts. All these circumstances combined were the means of arousing the attention of others, and of inducing them to embark in this good cause. This society is now (1843) denominated the "Abstinence Union Society," connected with which are the Rev. Messrs. Fraser and Sutcliffe. In 1841 the Rt. Rev. Dr. Fleming, Roman Catholic bishop, commenced the advocacy of total abstinence. He imported several thousand medals; on one side of which the trade, fisheries, and agriculture of Newfoundland were represented, and on the reverse side was the pledge, with the name of the president. The bishop appointed one of his clergymen, the Rev. Kyran Walsh, to administer the pledge, when he immediately commenced in the catholic chapel. During the first day several hundreds enrolled their names and received the pledge. From this time, through the zealous exertions of the Rev. Mr. Walsh, the temperance

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cause has made rapid strides. The present president of the Catholic Temperance Society, the Rev. John Forrestal, is indefatigable in his exertions to rescue his fellow-men from the degrading vice of intemperance.

In 1842 the Rev. Thomas F. H. Bridge, M.A., rector of St. John's parish church, began to administer a temperance card amongst the protestant part of the community. The rev. gentleman is still nobly advocating this good cause; hundreds through his instrumentality have dashed the intoxicating cup from their lips (we hope for ever). In Conception Bay the catholic clergymen are using every means for the spread of temperance, and among the protestant clergymen are the Rev. Johnston Vicars, of Port-de-Grave, and the Rev. John S. Addy, of Carbonear, who are both administering the pledge to the members of their respective communions.

If we survey this country geographically, we see an island 350 miles long and 200 broad, whose population extends over a line of coast (including bays and sinuosities) of from 800 to 1000 miles. Now, when we see such a great extent of territory, and are informed that teetotalism only extends over a narrow strip of land, in St. John's, and along the shores of Conception Bay, it would lead us to suppose, that total abstinence had advanced very little; but when we survey this country statistically, and see its population estimated at between 90,000 and 100,000, and more than half these living in St. John's and Conception Bay, and when we are informed

that the number of teetotalers throughout the island are upwards of 22,000, viz., 20,000 catholics and 2,000 protestants, we are led to believe that the temperance cause has advanced in a very rapid manner in Newfoundland. At a temperance entertainment which took place at Cherry Gardens, in the neighbourhood of St. John's, on the 26th July, 1843, his Excellency, Sir John Harvey, delivered the following speech :

"Ladies, Rev. Gentlemen, and Gentlemen,

"I am highly gratified by the opportunity which my attendance here this day affords me of publicly repeating those declarations which I have so frequently made of my sentiments of the inappreciable benefits which associations for the promotion, extension, and endeavour to render universal the practice of temperance are calculated to confer upon society at large. Temperance, in its largest and best sense, in a word, in its scriptural sense, is a virtue not only strictly enjoined by the religion which we all profess, but essential to its pure practice, beyond, perhaps, any other of the Christian virtues, and it has accordingly been urged upon mankind with a holy zeal and affectionate solicitude proportioned to its importance, by the preachers of God's word in all Christian ages; while in our day it has fallen to the lot of an humble individual belonging to a separate congregation of our fellow-christians, to be made the instrument of enforcing the practice of this virtue, in a manner and to an extent which would appear to evince to every pious mind that the favour of Heaven is with the endeavour, wherever it may be zealously made, and that He is in the work who alone can prosper it. The amount of benefit which temperance is calculated to confer upon mankind can only

be measured by the amount of misery from which it tends to relieve them. The blessings which it draws down upon its disciples are co-extensive with the evils which are induced by contrary habits, and it may with justice be said of 'temperance' as of 'mercy,' that it is 'twice blessed,' blessed to those who practise and those who are the recipients of its advantages, viz. universal society. But above all does it commend itself to every Christian parent, solicitous as they must be for the welfare, temporal and eternal, of those who look up to them, into the bosom of whose families it carries health, peace, contentment, and prosperity in the ratio in which it expels want, disease, sin, and wretchedness. Surely, then, it is incumbent on all to exert whatever influence each in his station may possess in endeavouring to encourage and to promote associations formed for a purpose so entirely in accordance with our duties as men, as Christians, and as heads of families; and I emphatically declare, that I am unable to perceive any sufficient plea or ground of exemption from this obligation in any rank or station.

"Ladies, Rev. Gentlemen, and Gentlemen,

"I will not detain you by further needlessly expatiating upon a theme which I feel to be full of deep interest, and in its nature most tempting to enlarge upon. I renew to you my thanks for the opportunity which the invitation to meet you here to-day has afforded me of witnessing a truly delightful re-union, one which, in addition to present innocent recreation and enjoyment, no one now present will, I confidently predict, ever have occasion to look back upon with other feelings than those of unalloyed satisfaction and pleasure."

At a temperance festival held in the Factory at St. John's, on the 22nd February, 1844, His Excellency delivered the following sentiments:

"Ladies, and Gentlemen, advocates and promoters, by precept and example, of the inestimable advantages resulting from this excellent institution ;

"I have great pleasure in complying with the wishes of your respected president, by attending here this evening, as I have in redeeming my promise to him, by addressing a few observations to the meeting. They will be brief, but will be so far satisfactory as that they are altogether congratulatory.

"In the first place, let me offer my congratulations upon the evidence afforded by this numerous and respectable company of the steady and satisfactory progress which the cause of temperance is continuing to make in this community; in which all classes bear their willing testimony to the salutary and beneficial effects to the cause of morality, and the great addition to the sum of human happiness, which have been produced by these associations; and by none is that testimony borne in a more emphatic manner than by the ministers of religion. And, secondly, I would offer my congratulations upon the gratifying fact, that not only has the great cause of temperance not retrograded in public estimation in the mother country, but, on the contrary, has stood all those tests which rooted prejudice has been able to raise against it, has triumphantly asserted its (may I not say) divine origin, and has been stamped with the approbation of all that is wise and good throughout this great empire, as calculated, far beyond any former secular impulse, to aid the Gospel dispensation, by carrying a blessing into the bosom of every family, but more especially into those of the industrious poor.

"Thus encouraged by the signal success which has crowned the beginnings of this work of true Christian benevolence, let me conclude these brief remarks by the expression of an earnest and humble hope and prayer,

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that the efforts of the pious and benevolent, for the promotion of so good a cause, may never be relaxed, but may continue to prosper throughout the world."

Temperance Societies will be mighty agents in the promotion of great blessings in Newfoundland. Already has our political state felt the conciliatory and softening touches of the magic wand of temperance. This great movement has exerted a beneficial influence on our trade and commerce, by creating new wants and forming new habits. It has awakened the dormant energies of intellectual existence, and given a taste for literature. It has excited new hopes, new fears, and new desires, which have been highly conducive to the spread of religion and the glory of God. Let total abstinence be diffused throughout the length and breadth of the country, and Newfoundland will be as happy as the waves are green that dash upon her shores.

What a host of evils intemperance carries in its train! No picture can sufficiently portray the horrors of this evil and vicious propensity. It has torn from the human heart the kindest sensibilities and dearest affections; it has caused the aged and widowed mother to mourn through nights of anguish for the ungrateful conduct of her profligate son, worked up to madness by the influence of the fiery alcohol; the arm of the midnight assassin has been nerved to wreak his vengeance in the blood of his fellow-man. Collect all the murders, cruelties, treachery, injustice, and every crime we have ever heard or read of, and bind

them together in one dark bundle, then think of all these crimes concentrated in that bundle, put them in the scales, and intemperance will outweigh them all.

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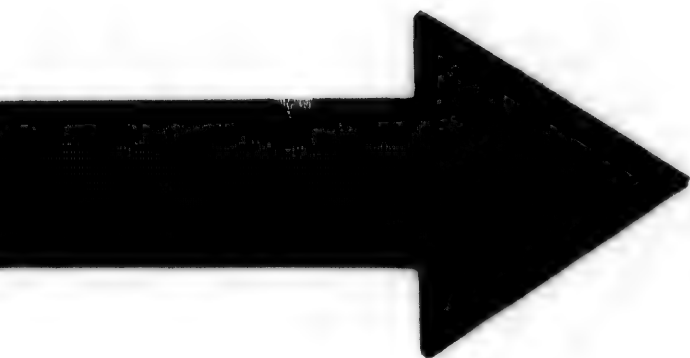
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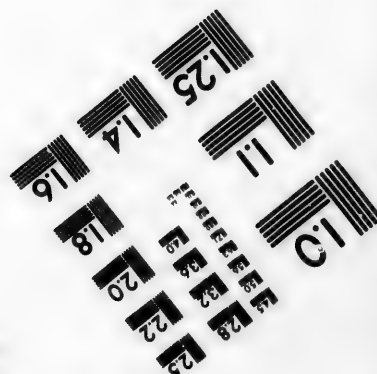
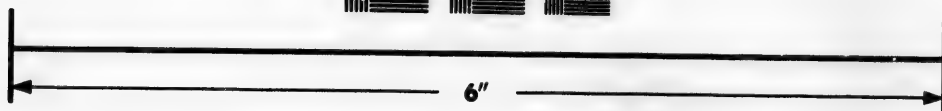
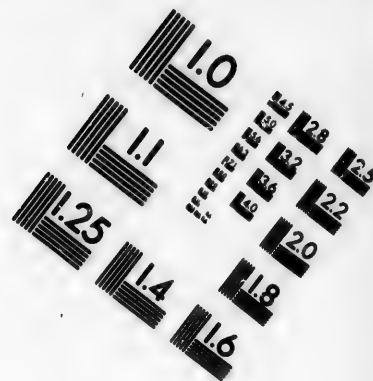
"Winter, still ling'ring on the verge of spring,
Retires reluctant."

THOMSON.

THE first thing that occurs in Newfoundland to break the winter's torpor, is the bustle and animation attending the out-fitting of vessels for the seal fishery. The annexed engraving "contains a south view of St. John's harbour, together with the vessels of that port, bound to the seal fishery, preparing to depart by means of ice channels. The scene was drawn March 16th, 1838, during a severe frost, by Mr. Gosse, and dedicated, by permission, to his Excellency, Captain Henry Prescott, the then governor. St. John's is one of the finest harbours in Newfoundland. It is situated on the most eastern part of the coast, facing the broad Atlantic Ocean. The entrance is narrow, the distance from Signal Hill on the north side to Fort Amherst on the south side being 360 fathoms, but from Chain Rock to Pancake Rock, is only 220 yards across. On each side are lofty cliffs, from 500 to 600 feet in altitude, studded with forts and batteries. According to the last returns, in 1836, St. John's contained 15,000 inhabitants and 2,226 dwelling-houses; there were 3,438 acres of land under cultivation, producing 4,852 bushels of oats and other grain, 91,955 bushels of







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potatoes, and 3,128 tons of hay; there were 365 horses, 981 neat cattle, 116 hogs, and 482 sheep. It has greatly increased since these returns were made; the population now probably is little short of 20,000. The number of vessels sent from St. John's to the seal fishery at different periods was as follows:

YEARS.	SHIPS.	TONS.	MEN.
1830 ... 92 ...	6,198	...	1,985
1831 ... 118 ...	8,046	...	2,578
1832 ... 153 ...	11,462	...	3,294
1833 ... 106 ...	8,665	...	2,964
1834 ... 125 ...	11,020	...	2,910
1835 ... 120 ...	11,167	...	2,912
1836 ... 126 ...	11,425	...	2,855
1837 ... 121 ...	10,648	...	2,940
1838 ... 110 ...	9,300	...	2,826
1839 ... 76 ...	6,447	...	2,029
1840 ... 75 ...	6,190	...	2,058
1841 ... 72 ...	5,965	...	2,078
1842 ... 74 ...	6,085	...	2,054
1843 ... 106 ...	9,625	...	3,177
1844 ... 121 ...	11,088	...	3,775

Sixteen of this number sailed from ports to the northward.

The number of vessels employed in the seal fishery throughout the island in 1834 was as follows:

	SHIPS.	TONS.	MEN.
St. John's	125	11,020	2,910
Conception Bay	218	17,785	4,894
Trinity Bay	19	1,539	418
Green's Pond, &c.	12	972	264
Total	374	31,316	8,486

OUTFIT FOR THE SEAL FISHERY AT HARBOUR-GRACE AND CARBONEAR, IN 1836.

	SHIPS.	TONS.	MEN.
Carbonear	80	6,889	1,918
Harbour-Grace	32	2,611	741

THE NUMBER OF VESSELS FITTED OUT FOR THE SEAL FISHERY IN
CONCEPTION BAY, DURING THE YEARS 1837 AND 1838.

1837.

	SHIPS.	TONS.	MEN.
Harbour-Grace	49	4,099	1,166
Carbonear	74	6,446	1,798
Brigus, Cupid's, Port-de-Grave, and Bay Roberts ... }	83	7,245	1,973
Total	206	17,790	4,937

1838.

	SHIPS.	TONS.	MEN.
Harbour-Grace	47	3,887	1,152
Carbonear	72	6,312	18,55
Brigus, Cupid's, Port-de-Grave, and Bay Roberts ... }	81	7,105	2,099
Total	200	17,304	5,106

OUTFIT FOR THE SEAL FISHERY IN NEWFOUNDLAND, IN 1844.

	SHIPS.	TONS.	MEN.
St. John's	121	11,088	3,775
Harbour-Grace	48	4,857	1,877
Carbonear	52	4,567	1,469
Brigus and Cupid's	43	4,002	1,385
Port-de-Grave	10	860	279
Bay Roberts	11	944	802
Spaniards' Bay, &c.	9	851	253
Trinity	11	918	334
Hants Harbour, &c.	5	443	165
Catalina, &c.	19	1,447	514
Green's Pond, Salvage, &c. ...	19	1,408	503
Twillingate, Fogo, Tilting Harbour, &c. ... }	10	539	171
Total	358	31,924	10,527

Sixteen of this number sailed from ports to the northward, which are not included in the numbers given for the northern ports.

The seal fishery of Newfoundland has assumed a degree of importance far surpassing the most sanguine expectations of those who first embarked in the enterprise, and is now become one of the greatest sources of wealth to the country. The interest of every individual, from the richest to the poorest, is interwoven with it, and the prosecution of the voyage causes more anxiety, excitement, and solicitude, than any other business in Newfoundland, or probably in the world.

In the commencement, the seal fishery was prosecuted in large boats, which sailed about the middle of April; and as its importance began to be developed, schooners of from 30 to 50 tons were employed in it, which sailed on the 17th of March. The vessels now engaged in this fishery are from 50 to 150 tons, manned by from 25 to 40 men each, according to the size. They sail from St. John's on the 1st day of March, and from Conception Bay and the northern ports from the 5th to the 10th of that month. The length of time spent on this voyage is from three to eight weeks. The owner supplies the vessel with provisions and every other necessary. One-half the product of the voyage is equally divided among the crew, the other half goes to the owner of the vessel. At St. John's the crew have to pay from two to three pounds each for their berths, and in Conception Bay and the northern ports from ten to thirty shillings. A hired master

receives from fourpence to sixpence per seal, and sometimes five pounds a month besides. A man's share is allowed to the master, which, however, goes to the owner of the vessel. What is called the seal is the skin with the fat or blubber attached, the carcase being thrown away. Some years back these pelts were sold for so much a-piece, varying in price according to the size and quality; but in consequence of the practice of leaving behind a portion of the fat, it became necessary to purchase them by weight. This spring, 1843, the young sold at twenty-one shillings, and the old at nineteen shillings per hundred weight.

Naturalists describe no less than fifteen species of seals. The kind most plentiful, and which pass along the coast of Newfoundland with the field ice, are the harps or half-moon seals (*Phoca, Groenlandica*). About the latter end of the month of February, these seals whelp, and in the northern seas deposit millions of their young on the glittering surface of the frozen deep. At this period they are covered with a coat of white fur, slightly tinged with yellow. I have seen these beautiful "white coats," laying six and eight on a pan of ice, resembling so many lambs enjoying the solar rays. These animals grow very rapidly, and in about three weeks after their birth begin to cast their white coat. They are now easily caught, being killed by a slight stroke across the nose, with a bat or gaff: when they are in prime condition, the fat being in greater quantity and containing purer oil than at a later

period of their growth. It appears to be necessary to their existence that they should pass a considerable time in repose on the ice, and during this state of helplessness we see the goodness of Providence in providing these amphibious creatures with a thick coat of fur, and also a superabundant supply of fat, as a defence from the chilling effects of the cold ice and the northern blasts. Sometimes, however, numbers of them are found frozen in the ice. These "cats" are highly prized by the seal-hunters, as the skin when dressed makes excellent caps for them to wear while engaged in this perilous and dangerous voyage. At one year old these seals are called "bedlamers." The female is without the dark spots on the back which form the harp; and the male does not receive this mark until two years old. The voice of the seal resembles that of the dog, and when a vessel is in the midst of myriads of these creatures, their barking and howling sounds like that of so many dogs, causing such a noise as to drive away sleep during the night. The general appearance of the seal is not unlike the dog; hence, some have applied to the seal the name of sea-dog, sea-wolf, &c. These seals seldom bring forth more than one, and never more than two at a litter. They are said to live to a great age. Hugh Mowlim, of Bonavista, informed me, that he saw a seal which was caught in a net; it was reduced to a mere skeleton, consisting of nothing but skin and bone; the teeth were all gone, and its colour a white gray, which he attributed to old age.

Buffon says, "We are unacquainted with the time of the female gestation, but if we judge from the time of their growth, the length of their lives, and the size of the animals, it will appear to be many months. The time also that intervenes from their birth till they are full-grown being many years, they of course must live very long. I am of opinion that these animals live upwards of an hundred years, for we know that cetaceous animals in general live much longer than quadrupeds; and as the seal fills up the chasm between the one and the other, it must participate of the nature of the former, and consequently live much longer than the latter."

The hooded seals (*Phoca Cristata*, *leonina* of Mohr), so called from a piece of loose skin on the head, which can be inflated at pleasure; and when menaced or attacked this hood is drawn over the face and eyes as a defence from injury, at which time its nostrils become distended, appearing like bladders. The female is not provided with this hood. An old dog hood is a very formidable animal. The male and female are generally found together, and if the female happens to be killed first, the male becomes furious. Sometimes it has taken fifteen or twenty men upwards of two hours to despatch one of them. I have known a half dozen handspikes to have been worn out by endeavouring to kill one of these dog hoods. They will snap off the handles of the gaffs like as if they were cabbage stumps. They frequently attack their assailants. I knew an individual who was dreadfully bit in the thigh by one of them. When

they inflate their hoods it seems almost impossible to kill one of them, for the shot, when fired from a gun, does not penetrate through the hood. Unless this animal can be hit somewhere about the side of the head, it is almost a hopeless task to attempt to kill him. These animals are very large. Some of their pelts which I measured were from fourteen to eighteen feet in length. The young hoods are called "blue backs." Their fat is not so thick nor so pure as the harp's, but their skins are of more value. They also breed farther to the north than the harps, and are generally found in great numbers on the outer edge of the ice. They are said not to be so plentiful, and to cast their young a few weeks later than the harps.

The square flipper, which is perhaps the great seal of Greenland (*Phoca Barbata*), although there it does not attain to so large a size as the hooded seal, while in Newfoundland it is much larger, is now seldom seen. The walrus (*Trichechus Rosmarus*), sometimes called sea-horse, sea-cow, and the morse, is now seldom met with. Formerly this species of seal was frequently captured at this season on the ice. This animal is said to resemble the seal in its body and limbs, though different in the form of its head, which is armed with two tusks, sometimes twenty-four inches long, consisting of coarse ivory; in this respect much like an elephant. The under jaw is not provided with any cutting or canine teeth, and is compressed to afford room for these enormous tusks, projecting downwards from the upper jaw. It is a very large animal, sometimes measuring twenty feet long, with

a great massy body, and weighing from 600 to 1500 lbs. Its skin is said to be an inch thick, and covered with short yellowish brown hairs.

The number of seals taken at Bonavista this spring (1843), by persons who had gone off on the ice from the shore, was estimated at 20,000, and it was calculated that upwards of 40,000 were taken to the shore throughout the Bay. The following statement is taken from the "Newfoundlander" newspaper :

"The following is an account, ascertained from the most authentic sources, of the number of seals landed at the several ports of the island in the spring of 1839:

St. John's, by 98 out-port vssels ...	150,576
Do. by 76 St. John's vessels	91,749
	242,325
Harbour-Grace	46,857
Carbonear	41,019
Trinity	33,000
Green's Pond	11,500
Brigus	9,200
Spaniards' Bay	6,200
King's Cove, &c.	5,580
Catalina	5,560
Bay Roberts	5,200
Port-de-Grave	4,200
Fogo, &c.	2,000

Making a total of 412,641

which will produce 5,158 tons of oil imperial, at the usual calculation of 80 seals to a tun," valued at £30 per tun, amounts to £154,740.

The number of seals taken at different periods throughout the island is as follows :

YEARS.	SEALS.
1795 ...	4,900
1814 ...	156,000
1815 ...	141,370
1820 ...	221,334
1825 ...	221,510
1880 ...	300,681
1881 ...	559,842
1882 ...	442,003
1888 ...	384,699
1894 ...	860,155
1895 ...	557,490
1896 ...	384,321
1898 ...	375,361
1840 ...	631,385
1841 ...	417,115
1842 ...	344,683

On the 21st of March the vernal equinox commences, and the seal fishery carried on during this season of storms renders it particularly dangerous. It is a voyage of hopes and fears, trials and disappointments. Sometimes the seals are sought after at a distance of from two to four miles from the vessel, and during this toilsome journey the men have to jump from one pan of ice to another over horrid chasms, where gapes the ocean wave ready to receive them. Sometimes slob, or ice ground up by the action of the waves and covered with snow, is mistaken for hard ice, when the poor sealers, leaping upon it, sink and are engulfed in the mighty deep. Frequently when the seal hunters are at a distance from the vessel in search of seals, a snow storm or a thick fog comes on, when no object around can be discovered; the light shown from the vessel cannot be seen; the guns fired, and the horns blown cannot be heard; night comes on,

and the poor sealers die of fatigue, cold, and hunger on the frozen deep. Scarce a voyage passes but what conveys the bitter intelligence to the wife and mother that she is a widow and her children orphans. Sometimes vessels are crushed between large masses of ice called "rollers," when all are consigned to one common destruction.

"Ill fares the bark, with trembling wretches charg'd,
That, tost amid the floating fragments, moors
Beneath the shelter of an icy isle,
While night o'erwhelms the sea, and horror looks
More horrible. Can human force endure
Th' assembl'd mischiefs that besiege them round?
Heart-gnawing hunger, fainting weariness,
The roar of winds and waves, the crush of ice,
Now ceasing, now renew'd with louder rage,
And in dire echoes bellowing round the main."

Feeling a great desire to gratify a youthful curiosity, on the 11th of March, 1834, I embarked on board the Alpha, belonging to the late firm of Tocque and Levi, and made an experimental trip to the seal fishery, during which we encountered a dreadful storm; it was considered the heaviest gale ever experienced by the oldest man in the vessel. In this storm no less than fourteen vessels were lost, many of which, together with their crews, sleep among the hidden things on the bed of the ocean.

This spring (1843), in the month of March, I accompanied Wm. Sweetland, Esq., J.P. of Bonavista, to view several shipwrecks. On the south side of Cape Bonavista were two vessels on shore, out of one of which the crew were taking the seals; and on the north side of the Cape were

two more vessels, a short distance from the shore, water-logged and abandoned. All these vessels were forced in upon the land by the running ice, the crews of which were all saved. Upwards of twenty vessels were lost prosecuting the seal fishery this spring, and part of several crews.

The seal fishery is not only surrounded by physical calamities, but it is a nursery for moral and spiritual evils. It has a tendency to harden the heart and render it insensible to the finer feelings of human nature. It is a constant scene of bloodshed and slaughter. Here you behold a heap of seals which have only received a slight dart from the gaff, writhing, and crimsoning the ice with their blood—rolling from side to side in dying agonies. There you see another lot, while the last spark of life is not yet extinguished, being stripped of their skin and fat; their startings and heavings making the unpractised hand shrink with horror to touch them.

In the prosecution of the seal fishery the sabbath is violated to an awful extent; there are, however, some honourable exceptions. Mr. G——, of Carbonear, regularly keeps divine service on board his vessel every Sunday during this voyage; and independently of the blessing of God accompanying the performance of this sacred duty, Mr. G—— has brought home more seals than most of his neighbours, who disregarded the holy sabbath. Mr. G—— informed me, that on two occasions, during two successive

voyages, on the Saturday evening he had his vessel moored to a larger pan of ice in order to devote the season of the sabbath to the service of God. On the Sunday morning a vessel came in alongside of him, and commenced taking seals, which amounted to several hundreds during the day. That such should be exceedingly trying to the mind and feelings, none who has ever visited the seal fishery can doubt. Although surrounded by such a powerful temptation, Mr. G——'s men made no attempt to touch a seal. During the night the ice had closed them in tight, so that a drop of water could not be seen in any direction, and there appeared no prospect of moving the following morning, and perhaps not for weeks; but on the arrival of Monday morning these gloomy fears were dissipated; before eight o'clock a lake of water broke away immediately under the bows; sail was crowded on the vessel, and in the course of a few hours they were in the midst of myriads of seals, where they completed their cargo in a few days, amounting to upwards of 5,000 seals, while the other vessel, the crew of which desecrated the sabbath by taking seals, remained jammed for several days, and took but few seals afterwards. I know of several similar instances of success having attended the observance of the sabbath.

The white or polar bear (*Ursus Maritimus*, or *Arcticus*) at this season, is sometimes seen on the coast, regardless of the ocean storm and the intense cold. This animal roams among the rifted ice in search of food. In 1841 one of

these animals was killed near St. John's. It seldom, however, travels in the woods more than a mile or two, and then only by accident, arising perhaps from the inconvenience of weather. He appears to be altogether carnivorous, subsisting on the carcasses of seals, fish, and other animal substances. I have eaten some of the flesh of this animal; it had very much the appearance of beef, but of a coarser grain, and not so good tasted. It is not a little singular that the prismatic colours were reflected on every slice of flesh that I saw cut off before being cooked. The length of this animal is from seven to nine feet, and its height from three to five. I saw the skin and paws of one which was brought in from the ice by a schooner at Carbonear; the paws were enormously large, and on each were five sharp claws; the hair on the skin was long and thick, and the colour a yellowish white.

"The bear," says Captain Lyon, describing its mode of seal catching, "on seeing his intended prey, gets quietly into the water and swims to the leeward of him, from whence, by frequent short dives, he silently makes his approaches, and so arranges his distance, that at the last dive he comes to the spot where the seal is lying. If the poor animal attempt to escape by rolling into the water, he falls into the bear's clutches; if on the contrary, he lies still, his destroyer makes a powerful spring, kills him on the ice, and devours him at leisure.

"Unlike his cogeners, the male polar bear does not appear to hibernate or slumber away

the months of winter in his retreat; at least, it seems probable that such is an unfrequent occurrence. The female, however, retires to some den or cave among the rocks, and which the snows soon close; here she brings forth two young, about Christmas, and leaves her seclusion in the ensuing March, her cubs being at that time as large as a shepherd's dog. On her re-appearance, the female is very lean and doubly ferocious, having not only her cubs to protect, but being also ravenous for food. While the female is secluded in her winter den, the males, according to Hearne, leave the land and go out on the ice to the edge of the open water, in search of seals; they return by May."

Our pond ice has now become an article of exportation. About this time last year (March, 1842) three or four cargoes of ice were being sent to the United States and the West Indies, where it usually sells at forty shillings per ton. In the United States, Captain Foster, of the American brig *Cherub*, informed me, that a gentleman at Boston has made an immense sum of money by the exportation of ice; he has several ponds in the neighbourhood of Boston, which, as soon as they become ice, are cut into large square blocks ready for exportation, and then deposited in a large store which is lined with tan-bark, in order to keep it cold. Captain F—— stated that he was engaged to take a cargo on freight from Boston to New Orleans, for which he received twelve hundred dollars. Arriving at New Orleans just at a time when ice was in

great demand, his cargo sold at threepence per pound. Although the cargo had been stowed in separate blocks, yet on opening the hatches it was found all of one solid mass of ice, which was cut out by means of hatchets.

Ice is an article of which there is no lack in Newfoundland, and the demand for it only wants to be more generally known in order to our wealthy and more enterprising planters taking on board their vessels cargoes of this novel export, and transporting it to warm countries, where it is a great luxury, being generally used in Spain and Portugal as creams, and for other purposes. "A traveller who visited Pekin, says, that a favourite dish in that city is roasted ice, which is enormously dear, as very few cooks possess the skill and dexterity required for its preparation. A lump of ice is taken upon a sieve, and after being quickly enveloped in a sort of paste made of sugar, eggs, and spices, is plunged into a panful of boiling pork fat or lard. The grand point is then to serve it up before the ice has time to melt. What may be the peculiar attraction of this dainty dish it would be hard to say, for though frozen inside, it burns the mouth when first tasted."

Sometimes in the beginning of March a severe frost sets in, and often this month is more rigorous than any month during the reign of winter. The weather, however, is very changeable; sometimes the sun diffuses the genial influence of spring; at other times the cold north-east wind brings with it a snow-storm. Towards the last of this month south winds and rain generally

prevail, accompanied by a thaw, which dissolves the snow and ice. The ponds are freed from their icy chains, the brooks overflow, and torrents of water descending from the hills, saturate the ground in every direction. Cold north-east winds are very prevalent at this season. In the Transactions of the Meteorological Society of London, are the following remarks on the vernal winds:—

“Countries situated on the confines of the Arctic Circle remain buried in snow. This covering will unavoidably arrest the progress of spring in its advances towards the Arctic Circle, and prolong a milder kind of winter in the northern regions. The delay here pointed out is certain and annual, because the solar heat, instead of warming the surface of the country thus buried in snow, is absorbed by the icy covering, and employed in converting it into water of the temperature of melting ice. While the sun is employed in removing this impediment to vegetation in the north, his beams are warming the plains and valleys of the south, in consequence of which the thermometer in the shade frequently stands between sixty and seventy degrees at noon, and falls occasionally to the freezing point in the night. These facts show that the inhabitants of Britain enjoy an advanced state of temperature, while the people of Sweden and Norway are exposed to a degree of cold equal to the rigours of our winters. The preceding difference in the temperature of the atmosphere of Britain and the more northern regions, gives a greater specific gravity to the air of Sweden and Norway than to

that of England, as well as to all the intervening countries which are free from snow; and this excess of density is, in my opinion, the cause of the vernal winds. The conjecture here advanced is not entirely hypothetical, because it is confirmed by the laws of hydrostatics, which prove that when two columns of air of different specific gravities rest upon contiguous bases, the heavier will remove the lighter, and flow into its place. This is the reason of my conjecture, that the atmosphere of the north, which is kept dense by being in contact with snow, flows southward in a current which displaces the warmer and lighter air, and thereby produces the vernal winds."

Various signs of returning spring are now to be seen. The house-flies (*Musca Domestica*) are awaking from their winter's slumber, and are seen sporting on the wing every sunshiny day. On the 26th of this month (March, 1843) I saw a flock of sparrows (*Fringilla Nivalis*), called snow birds in America. They are the earliest of our songsters, and known by their single "chip."

"Thy harbinger, Summer, I see!
 The stranger's return let me hail,
 As for insects he sports o'er the lea,
 Or hastily skims on the gale!
 Ye breezes, be kind to the guest,
 He fears the sharp tooth of the cold;
 Blow genial and warm from the west,
 And his pleasures in sunshine unfold."

Nature has commenced her resurrection from the death of winter, though the naked landscape still presents a dreary and cheerless aspect. To-day I saw a caterpillar crawling on the fence,

enjoying the sunshine. Some insects which hibernate or winter in the larva state, are said to exist under that form more than a year.

These creatures are liable to many accidents, and we should suppose that a very little thing would crush them, were it not, as naturalists inform us, that some of these diminutive creatures are possessed of great muscular power. It is said that a caterpillar raised and made good its retreat from beneath a weight of four pounds. Others are endowed with a remarkable toughness of external covering, and when subjected to the severest pressure, so as to appear entirely lifeless, yet after some time will again revive and appear as if nothing had taken place. But others are more easily injured. Mr. Clouter has been to-day feeling the backs of his cattle for what he called "worms," which is the larvæ of the ox gad-fly (*Oestrus Bovis*). The general practice here is to search the backs of the cattle for the lumps which these flies make, in the middle of which is a hole, out of which a large whitish maggot is pressed. These flies are a great annoyance to cattle. In the summer they deposit their eggs by penetrating the skin of the back, which comes to perfection the following summer. It is said, when the maggot has acquired its full growth, it works itself out of its nest, and falls off the animal on which it has fed, to the ground, where it hides itself beneath some rock, or crawls into some fissure, and there its skin hardens into a black cocoon, within which it passes its last metamorphosis, when it comes out a beautiful

winged insect. Many people imagine these bots or maggots are owing to some disease, or the pooriness of their cattle. I knew an individual who intended killing a calf, but when he found the animal contained some of these maggots, he declined doing so, because he considered it not wholesome to eat. It is, however, well known, that the instinct of the parent insect causes it to seek those cattle which are full of juice and health, beneath the skin of which to place their eggs; hence, those animals possessing the lumps on their backs are by far the best and most healthy.

The month of April (1843) has been particularly fine and delightful. The oldest inhabitant I have conversed with has never before experienced such a continuance of warm, clear, sunshiny weather as this month afforded. The operations of the garden have commenced; vegetable nature, however, is not yet far advanced. There is no doubt that the vast fields of ice which hover around the eastern and northern coasts of Newfoundland at this season, tend to retard the progress of renovating spring. It is very probable that the chilling effects of the ice on vegetation would be felt much more severely, were it not that a warm current of water from the Gulf of Mexico passes along the coast. Dr. Leyell says, "But the effects of the Gulf stream on the climate of the North Atlantic Ocean are far more remarkable. This most powerful of known currents has its source in the Gulf or Sea of Mexico, which, like the Mediterranean and other close seas, in tem-

perate or low latitudes, is warmer than the open ocean in the same parallels. The temperature of the Mexico sea in summer is, according to Rennell, eighty-six degrees Fahr., or, at least, seven degrees above that of the Atlantic in the same latitude. From this great reservoir, or caldron of warm water, a constant current pours forth through the Straits of Bahama, at the rate of three or four miles an hour. It crosses the ocean in a north-easterly direction, skirting the great bank of Newfoundland, where it still retains a temperature of eight degrees above that of the surrounding sea. It reaches the Azores in about seventy-eight days, after flowing nearly three thousand geographical miles, and from thence it sometimes extends its course a thousand miles further, so as to reach the Bay of Biscay, still retaining an excess of five degrees above the mean temperature of that sea. As it has been known to arrive there in the months of November and January, it may tend greatly to moderate the cold of winter in countries on the west of Europe. There is a large tract in the centre of the north Atlantic, between the parallels of thirty-three and thirty-five degrees north latitude, which Rennell calls the 'recipient of the Gulf water.' A great part of it is covered by the weed called sargasso, which the current floats in abundance from the Gulf of Mexico. This mass of water is nearly stagnant—is warmer by seven or ten degrees than the waters of the Atlantic, and may be compared to the fresh water of a river overflowing the heavier salt water

of the sea. Rennell estimates the area of the 'recipient,' together with that covered by the main current, as being two thousand miles in length from east to west, and three hundred and fifty in breadth, from north to south, which he remarks is a larger area than that of the Mediterranean. The heat of this great body of water is kept up by the incessant and quick arrival of fresh supplies of warm water from the south; and there can be no doubt that the general climate of parts of Europe and America is materially affected by this cause. It is considered probable, by Scoresby, that the influence of the Gulf stream extends even to the sea near Spitzbergen, where its waters may pass under those of melted ice; for it has been found that in the neighbourhood of Spitzbergen, the water is warmer by six or seven degrees at the depth of one hundred and two fathoms, than at the surface. This might arise from the known law, that fresh water passes the point of greatest density when cooled down below forty, and between that and the freezing point expands again. The water of melted ice might be lighter, both as being fresh (having lost its salt in the decomposing process of freezing), and because its temperature is nearer the freezing point than the inferior water of the Gulf stream. The great glaciers generated in the valleys of Spitzbergen, in seventy-nine degrees of north latitude, are almost all cut off at the beach, being melted by the feeble remnant of heat still retained by the Gulf stream. In Baffin's Bay, on the contrary, on the west coast of Old

Greenland, where the temperature of the sea is not mitigated by the same cause, and where there is no warmer under-current, the glaciers stretch out from the shore, and furnish repeated crops of mountainous masses of ice, which float off into the ocean. The number and dimensions of these bergs is prodigious. Captain Ross saw several of them together in Baffin's Bay aground, in water fifteen hundred feet deep. Many of them are driven down into Hudson's Bay, and accumulating, these diffuse excessive cold over the neighbouring continent."

The beauties of spring have been celebrated in glowing terms. It is an interesting season. The genial influence of the mild air, refreshing and invigorating; the beautiful green diffusing itself over the landscape; the unfolding of Flora's lovely charms; the hum of the insect tribes floating on the air; the splendid plumage and music of the tenants of the groves; all conspire to fill the mind with adoration to the Being who governs nature's laws. Some parts of the scriptures give beautiful descriptions of spring: "Lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come."

"Tis sweet, when winter's tempest clouds retire,
To hear the music of the woodland choir,
To see fresh verdure deck the leafless grove,
The pure, clear sun through heaven's blue pathway rove,
New life, new beauty, start from every spray,
Green earth rejoicing, and her tenants gay."

The American robin, or thrush of Pennant (*Turdus Migratorius*), called the blackbird in

Newfoundland, made his appearance this year in April; it is one of the best known and earliest of our warblers; they generally visit us in May, and often while the ground is yet dappled with snow; they congregate in flocks on some garden fen, and give out their notes, which are regarded as the prelude to the general music of animated nature; they build their nests in a tree, and lay from two to five delicate green eggs; they are very plentiful, and while making provision for a future progeny, great numbers are killed for the table.

"Scare, if ye will, his timid wing-away,
But, O, let not the leaden viewless shower,
Vollied from flashing tube, arrest his flight,
And fill his tuneful, gaping bill with blood."

Butterflies are now seen spreading their gaudy wings, and fluttering in the radiance of the sun; the principal ones which charm us with their splendid hues are the forked (*Vanessa Furcillata*), tiger swallowtail (*Papilio Turnus*), black swallowtail (*Papilio Asterius*), chamberwell beauty (*Venessa Antiopa*), and the brimstone coloured butterfly (*Papilio Rhamni*). The butterfly is first an egg, next a grub or caterpillar, then a pupa or chrysalis, and lastly a winged insect. In this state it lays its eggs, and then dies.

"Look nature through, 'tis revolution all."

The transformation of insects is often used to illustrate the resurrection of the human body. "The wings of butterflies, sphinges, and moths, are covered with scales, so very minute as to be taken for extremely fine dust, placed in the most

perfect order, and having a great diversity of beautiful colours. They have been well compared to Mosaic work, produced by small pieces of variously coloured glass, stuck in a kind of paste, yet so minute as hardly to be perceived; looking rather like a picture whose parts are harmoniously combined. But here art is infinitely surpassed. A piece of the wing of a peacock butterfly, a quarter of an inch square, was placed under a microscope, when seventy rows, each containing ninety scales, were counted; there were therefore six thousand three hundred scales on one side of this small portion of wing, and an inch must have the amazing number of one hundred thousand seven hundred and thirty-six scales. The number of glass pins in a square inch of fine Mosaic is only eight hundred and seventy, so that it is one hundred and fifteen times coarser than the wing of this butterfly, which is of middle size, and the scales of which are proportional. What then, must be the comparison with some of the smaller tribes, whose whole dimensions are a quarter of an inch! The wing of a peacock butterfly prematurely taken out of a chrysalis, proved to be nine and a quarter times finer than that of the perfect insect; so that it was ten thousand and sixty-three times finer than the most boasted Mosaic."

The deer (*Cervus Tarandus*) are now re-migrating to the north, when numbers of them are killed, in the skins of some of which are found a quantity of small holes, caused by their tormentors and dreaded foes, the gadflies (*Oestrus Tarandi*).

These insects attack and deposit their *ova* on the back of the deer. The worm penetrating the skin remains under it during the winter, until the following year it becomes a fly. It is said another kind of *Oestrus* breeds on each side of the tongue, near the gullet of the deer. The "honk" of the wild goose (*Anas Anser*) is now heard winging its way to the lakes situated in the most solitary parts of the northern bays to bring forth its young. The black bears (*Ursus Americanus*) have now aroused themselves from their winter sleep, and are ranging abroad. Several of these animals are killed at this season in Green Bay. Their flesh is said to be excellent food. In Russia the paws are esteemed a great delicacy; the hams are cured and exported to different parts of Europe; their skin is a prime article of winter dress, and is also used for lining sleighs. These quadrupeds pass the winter in a state of torpor, in some solitary place in the woods, hiding themselves in the hollows of old trees and the fissures of the rocks, where, snugly concealed beneath the snow, they escape all enemies. They chiefly subsist on roots and berries. These animals are of a ferocious disposition, but when taken young are, to a certain extent, tamed. In 1840 I saw a young one at St. John's, on Signal Hill. It was chained to the block house, and about the size of a very large black dog, but much higher on the legs. He was very playful, and appeared familiar with his friends, though perhaps he hugged them a little too hard sometimes, as I was informed that a soldier, on terms of intimacy with him, received a very severe

squeeze, from the effects of which he did not recover for some weeks.

The Baccalieu birds, Turs, or Merrs (*Colymbus Triole*), have now occupied their isolated breeding places. These birds collect in vast assemblages to breed on the rocky islands of Baccalieu and the Funk. They form no nest, and lay their eggs, which are pyriform, of a greenish colour and great size, on the bare rock. Great quantities of these eggs are taken from these islands in the month of June by the fishermen. To one unaccustomed to visit these places, it presents almost a scene of terror, to see myriads of birds fluttering on the wing, darkening the air and screaming dreadfully.

"Who can recount what transmigrations there
Are annual made? what nations come and go?
And how the living clouds on clouds arise?
Infinite wings! till all the plume-dark air
And rude resounding shore are one wild cry."

The penguin or great auk (*Alca Impennis*, Linn.) about thirty years ago was very plentiful on the Funk Island, but has now totally disappeared. Incredible numbers of these birds were killed, their flesh being savoury food and their feathers valuable. Heaps of them were burnt, being used as fuel for warming the water, in order to pick off the feathers, there being no wood on the island.* I have been informed that the merchants of Bonavista, during the winter season, used to sell these birds to poor people by the hundred weight, in-

* It was thought that Guano might be found on this island. I procured a sample of what was supposed to be bird's dung, which, however, proved to be nothing more than bones and turf.

stead of pork. There are islands on the northern coast of Newfoundland, called the Penguin Islands, so named probably from the number of penguins at one time breeding on them. The penguin was from the size of a goose to double as large; its wings were short, resembling the fipars of the seal, and its feet broad and webbed. It was incapable of flight, and the position of its body when on the land was nearly erect. It waddled about very slowly. The appearance of these birds formerly indicated to the mariner the approach to land.

"There is something in the strange figure and aspect of the penguin well agreeing with the wild, lonely, remote islands in which it congregates. In beholding a spot on the surface of our globe, ocean-girt, and uninhabited by man, tenanted by thousands of these birds, which for ages—generation after generation—have been the uninterrupted occupiers of the place, we are thrown back upon primeval days; and we involuntarily recur to the now-extinct dodo, a wingless bird, which formerly tenanted the islands of Bourbon, Mauritius, and Rodrigue, once desolate and untrodden by the foot of man, as are still many of the haunts of the penguin; and the idea forces itself upon us, that, like the dodo, this bird also may, at some future time, become utterly annihilated."

Troops of boys and girls at this season sally forth in quest of dandelion (*Leontodon Taraxacum*). Some with tin pans, others with baskets, and each carrying a knife for cutting up the plant. The leaves of the dandelion are used in almost every

part of Newfoundland as a substitute for cabbage, during the months of May and June. The dandelion is also a very valuable medicinal herb; it has been used with great effect in cases of asthma and consumption.

The pale seal oil is now being drawn from the vats, and shipped for Europe. The quantity of seal and cod oil exported at different periods was as follows:—

IN	TUNS.
1815	8,225
1820	8,224
1825	7,806
1830	12,371
1832	10,010
1834	9,030
1835	11,780
1836	9,485
1838	8,591
1839	8,905
1840	12,724
1841	10,609
1842	8,976

The courts of law are sitting at this season. Terms of the supreme and circuit courts are held in the spring and autumn. The first regular court ever held in the island was by Captain Wiltbourn, about the year 1611, who was commissioned to impanel juries and rectify various abuses. In 1633 Charles I. promulgated certain laws for the better government of Newfoundland. Some of these laws were, that all persons who committed murder, or theft above forty shillings, were to be taken to England for trial; that no buildings erected for prosecuting the fishery should be destroyed at the end of the voyage; that, ac-

cording to the old and corrupt system, the master of the first fishing vessel arriving at any port should be admiral of the same during the season. These admirals were empowered to settle all disputes among the fishermen, and to enforce due attention to certain acts of parliament. In 1728 regular justices of the peace were first appointed, and during this year Captain Henry Osborne, the governor, divided the island into districts, and levied a rate of a half quintal fish on all boats-rooms and boats, for the purpose of erecting prisons, and also several pairs of stocks. He also empowered the captains of the ships-of-war on the station, to hold surrogate courts for determining civil causes. These judges were called floating surrogates. In order to preclude the necessity of sending criminals to England for trial, during the year 1737 a court of oyer and terminer was established in Newfoundland. In 1741 a vice admiralty court was established. The first court of common pleas was established in 1789, by Admiral Milbank, the governor; shortly after which another court was established to try civil and criminal cases; it was designated the "Supreme Court of Newfoundland," of which John Reeves, Esq. was commissioned as chief justice, who was succeeded in the office by Richard Routh, Esq. In 1816 Francis Forbes, Esq. afterwards Sir Francis Forbes, was appointed chief justice, which office he filled for a period of six years, and was succeeded in 1823 by Richard Alexander Tucker, Esq. The laws in all the out-harbours of Newfoundland at this period, were administered by

resident and floating surrogate courts, from which parties could appeal to the supreme court in St. John's, if the suit exceeded £40. The magistrates also held courts of session, which had jurisdiction in cases not exceeding forty shillings, and in cases of assault.

In consequence of the partial and corrupt administration of justice in the surrogate courts having been represented to the Imperial Government, in 1826 most important and beneficial changes took place in the administration of justice in Newfoundland. The surrogate courts were now abolished, and by the granting of a charter by the king, under authority of an act of parliament, a supreme court was established, consisting of a chief justice and two assistant judges. The island was divided into three circuits, northern, central, and southern, in which three separate courts were held, presided over by one of the three judges. The supreme court was empowered to admit qualified attorneys to practise in the different courts, and to grant letters of administration, and probates of wills. An appeal is permitted from the circuit courts to the supreme court, and from the supreme court to the Queen in Council. Courts of quarter sessions were now also established, and a sheriff appointed from year to year. The first judges of the supreme court were Richard Alexander Tucker, Esq. A.M., of the Inner Temple, Barrister-at-Law, chief judge; John William Molloy, Esq., and Augustus Wallet Des Barres, Esq., assistant judges, the second of whom, in a very short time, was removed

from office, and succeeded by Edward Brabazon Brenton, Esq. In 1833 Judge Tucker resigned his commission, and was succeeded in the office of chief judge by Henry John Boulton, Esq. late Attorney-General of Upper-Canada, who was succeeded in 1838 by the present chief justice, the Hon. John Gervase Hutchingson Bourne,* who together with the Hon. Edward Brabazon Brenton, and the Hon. Augustus Wallet Des Barres, are the present judges of the Supreme Court. Mr. Brenton being absent on leave, his place is supplied by the Hon. George Lilly acting assistant judge; Messrs. Tucker and Boulton had both been presidents of the Legislative Council, which was the chief cause of their resignation. The present chief justice, however, does not occupy, nor will any future chief judge occupy, a seat in the council.†

Trade is now at its full height; all is bustle and activity preparing for the fishery. About the tenth of June the vessels sail for the Labrador fishery: the Newfoundland fishery commences at some places in May, and at other places not until the last of June. Our principal articles of export are cod fish, oil, seal and cod, salmon, herrings, seal skins, tongues, and sounds. The exports from Newfoundland in 1814 were one million

* Mr. Bourne has since been removed from office, and succeeded by the Hon. Thomas Norton, late one of the assistant judges of Demerara.

† The number of attorneys practising at present at the bar in Newfoundland is 13, including the Hon. William Bickford Row, and the Hon. Bryan Robinson.

two hundred thousand quintals of cod fish, valued at two pounds per quintal; twenty thousand quintals of core fish in barrels; six thousand tuns of cod or train oil, at £32 per tun; one hundred and fifty-six thousand seal-skins, at five shillings each; four thousand six hundred and sixty-six tuns seal oil, at £36 per tun; besides salmon, mackerel, furs, and berries, to the amount of £10,000 sterling; the whole amounting to no less a sum than £2,828,976. The total amount of exports at different periods was as follows:

IN	£.
1822	729,198
1826	759,805
1827	764,586
1830	685,680
1831	803,532
1834	826,659
1836	808,066
1838	788,629
1839	901,385
1840	983,961
1841	952,555
1842	844,375

Road making has now commenced at all the principal places in the island. The sum granted by the local government, in 1843, for making and repairing roads, was £30,000. This is a large sum, considering that the whole revenue of the colony is only between £40,000 and £50,000. Roads will be the primary agents in developing the agricultural capabilities of Newfoundland, for wherever roads have been formed the cultivation of the soil has immediately commenced.

A gas company has just been established in

St. John's, with a capital of £6,000, which has been incorporated by an act of the legislature, and it is expected that the principal street of St. John's will be lit with gas in October next. It is but justice to say, that the introduction of gas into this island is mainly owing to the persevering exertions of Mr. Alexander M'c Auslan, smith and engineer.*

* In 1840 Mr. M'c Auslan called the attention of the public to this important matter, and in the winter of 1841 he constructed a small oil gas apparatus, which he put in full operation, and exhibited to the public a very pure and brilliant gas light, in a variety of different and ornamental burners. He at the same time explained the nature and qualities of gas, and its many advantages over all other modes of artificial light. Since this period Mr. M'c Auslan has not ceased to take a lively and persevering interest in keeping one of the greatest modern improvements constantly before the public mind.

HOME, SWEET HOME.

"THERE is a spot of earth supremely blest,
 A dearer, sweeter spot than all the rest,
 Where man, creation's tyrant, casts aside
 His sword and sceptre, pageantry and pride;
 While in his soften'd looks benignly blend
 The sire, the son, the husband, father, friend:
 Here woman reigns; the mother, daughter, wife,
 Strews with fresh flowers the narrow way of life;
 In the clear heaven of her delightful eye,
 An angel-guard of loves and graces lie;
 Around her knees domestic duties meet,
 And fire-side pleasures gambol at her feet.
 Where shall that land, that spot of earth be found?
 Art thou a man?—a patriot?—look around;
 O thou shalt find, howe'er thy footsteps roam,
 That land thy country, and that spot thy home!"

J. MONTGOMERY.

THE love of home is an inherent principle of our nature. The mind is touched with a thrilling sensation of delight when we look back to the happy period when, with father and mother, brothers and sisters, we assembled around the fire-side. Here love reigned, and those dear domestic hours never wore a fringe of woe, save when affliction's breath tainted the lovely scene; else all was joy and hope, gay as the morning, and no thought of separation ever flitted across the unruffled mind. Here have we heard the familiar purring of the cat, and the monotonous hum of the tea-kettle;

while the frost of winter drove every member of the family around the blazing fire. Here, after the great orb of day had sunk to rest, have we heard the ticking of the little death-watch (*Termes Pulsator*), while some member of the family has regarded its tapping as ominous of evil.

"What is the death-watch, which excites the fear
Of vulgar minds, and half absorbs the breath,
By fancied supernatural beings near,
To warn poor mortals of approaching death?
The horrid sprite—this harbinger of fate,
Is but an insect tapping for its mate."

And the chirping of the cricket (*Acheta Domestica*), caused by the friction of its wings, has been welcomed as a messenger of good.

"Little inmate full of mirth,
Chirping on my kitchen hearth,
Wheresoe'er be thine abode,
Always harbinger of good."

The thief in the candle, and the bright sparks indicating the coming of letters have occupied our attention. All these little incidents, and a thousand more, recall the happy days of early home.

"Be it a weakness, it deserves some praise,
We love the play-place of our early days;
The scene is touching, and the heart is stone
That feels not at that sight, and feels at none.
The wall on which we tried our graving skill,
The very name we carv'd subsisting still;
The bench on which we sat while deep employ'd,
Though mangl'd, hack'd, and hew'd, not yet destroy'd."

We carry with us every where a love of home, which nothing, no, nothing can dissipate from our minds. From the icy shores of Greenland to the

sultry climes of Africa, it is balm to the bosom
 torn with sorrow. The dying soldier in the bat-
 tle-field, amid the tears and cries of thousands,
 thinks of his aged parents, and "home, sweet
 home," soothes his dying pains. The immortal
 Nelson, amid the roar of cannon and the groans
 of the dying strewn around him, and even while
 the scenes of mortality were fast fading from his
 view for ever, with his expiring breath speaks of
 the scenes of home.

"But, see that scar-worn man, who looks on high,
 With musing valour mirror'd in his eye;
 Not all the bleeding revels of the day
 Can fright the vision of his home away;
 The home of love, and its attractive smiles,
 His wife's endearment, and his baby's wiles:—
 Fights he less brave through recollected bliss,
 With step retreating, or with sword remiss?
 Ah no! remember'd home's the warrior's charm,
 Speed to his sword, and vigour to his arm;
 For this he supplicates the God afar,
 Fronts the steel'd foe, and mingles in the war."

To the sailor, wandering over the waves, amid
 the howling of the stormy hurricane and mad-
 dened boiling surf, the thought of seeing again
 "home, sweet home," gladdens his spirit, and more
 than compensates for the hardships of the voyage.

"Borne like a sunbeam on the bounding waves,
 Behold a mariner the tempest braves!
 Home, life, and love, and near-imagin'd death,
 Nerve the stout limb, and lengthen out his breath."

When the traveller, roaming in a foreign land,
 thinks of home, he touches a chord which starts
 the unbidden tear. The name of the country to
 which he belongs meets his eye as a gem; it

adorns the object with which it is connected; it excites pleasing remembrances, and he revels in the bright visions of "home, sweet home."

The profligate who has left his home and friends, and whose conscience, seared with blackened crimes, burdens his guilty soul, is eased of his load of woes when he looks behind and thinks of his deserted home. The captive, shut up in dungeon gloom, excluded from the pure air and the light of day, chained to the damp cold wall of his dismal prison, lonely and sad, he sits still, waked by recollection, his spirit takes its flight, and mingles once again amid the scenes of home. The beggar, wandering from door to door, poor and friendless, amid the dark and dreary winter storms, who knows not whither to rest his weary, cold, and famishing body, thoughts of happier days gather around his heart—he too once had a home, nursed and tenderly lulled to sleep with the kiss of love on the lap of his fond parents, who now sleep in the cold silent tomb.

"At wintry eve, when savage night-winds blow,
Pierce his cold cheek, and drift his locks of snow,
As oft the vagrant shivers through the street,
No voice to pity, and no hand to greet.
With many a pause he marks that window-pane,
Whose flick'ring blaze recalls his home again!
The friend and face, the music and the mirth,
And social magic of his evening hearth,
Awak'd by mem'ry, warm his widow'd heart,
Till real woes in fancied bliss depart;
And one by one, as happier days appear,
To each he pays the homage of a tear;
Though homeless, still he loves home's joyous glare,
Looks up to heaven, and feels *his* home is there!"

The winter season gathers the scattered members of a family around the social hearth. It is a delightful scene when the parents and children are seated around the blazing winter's fire, after the shades of night have curtained the vaulted sky, and the candle twinkles around the room. It is now the domestic affections are called into active exercise; each member of the family is employed; here you behold one sewing, while at the same time engaged in a profitable conversation; there you see another reading some interesting book, while a "flower of life," a little rosy blue-eyed boy is occupying the attention of the parents; and if religion throws her hallowing influence over the scene, hope bears them on her wings to that home, where "sweet fields beyond the swelling flood stand dressed in living green," and they anticipate the happy period when they shall greet each other's arrival at their everlasting home above; a home, where "their souls shall banquet and be satisfied, fully and for ever;" a home, "whose wide regions they shall traverse in all the might of their untired faculties, and in all the glow of new and heaven-born energies, discovering and gathering fresh accumulations of intelligence, satisfaction, and surprise;" a home "in which the thrice holy Divinity, enshrined in our nature, in the person of Immanuel, is beheld and adored, without imperfection and without intermission, where hymns of praise, and hallelujahs of redemption, poured forth by blest voices without number, swell the music of eternity."

Having been invited to spend the evening with Mr. — I went at an early hour, when the following conversation passed between the father and son.

Father. I saw that dog of Mr. Carroll's, with which you were so much amused the other day.

Lloyd. Did you see him perform any feats?

Father. Yes, we were about half a mile from the house, when Mr. Carroll directed me to hide something under a stone. I accordingly did so. He then gave a loud whistle, and immediately we saw the dog running towards us at full speed. On his coming up to us Mr. C. told him I had hid something, and directed him to find it. The dog at once began smelling about, and soon discovered what I had concealed, which he brought to us between his teeth. He was also made to perform several other things.

Lloyd. Is not the sagacity of animals called instinct?

Father. It is; but in this case it was not what is called pure instinct, because the dog had been previously taught to perform these feats.

Lloyd. I believe the difference between instinct and reason is, that instinct works without deliberation, and makes no improvement upon the actions of others; whereas reason contemplates and improves upon the inventions of others, and arranges its actions according to circumstances.

Father. That is the general distinction between instinct and reason. I am of opinion that this mysterious instinct, which directs the lower orders of created beings, is no other than the operation

of a spiritual and an immortal principle planted within them by the Almighty.

Lloyd. Some persons suppose, that after the death of animals, they sink into annihilation.

Father. A great number are of that opinion, but it is a most unwarrantable assumption, for we have reason to believe that every created being in the beginning was stamped with immortality, nor was death known until after the transgression of Adam; therefore the death of brutes, as well as of man, was an effect of the introduction of sin into our world. We have no proof that any part of either animated or inanimate nature has been destroyed, or that it ever will be. I believe that no particle of matter will ever be consigned to annihilation; various revolutions are constantly taking place in different objects, but these changes do not imply that they are annihilated.

Lloyd. Have not many learned men written upon the future life of animals?

Father. They have. Deane says, "Brutes are liable to momentary sufferings and transient evils. They have their dark hours of pain and sickness, and die under the sad appearance of agony, like the beings that are above them. They feel alike and die alike; and yet for all this we say, the brutes have no share in futurity. It is easy to assert this, but not so easy to answer what follows thereon. They suffer much at present, and, if this is all, we must then conclude, that they were produced in an evil hour and a fatal moment. I know not whether we should not be obliged to go farther, and impeach the divine

goodness. Pain and death are manifestly foreign accidents, neither decreed, inevitable, nor necessary from the nature of the subjects in which they are found, but existing casually, or after the manner of contingencies. The fall of man is the true point from which the natural evils of this life proceed. Physical evil, considered as an effect of sin, teaches us to keep a strict eye to virtue in all the ways we pursue for the attainment of present good. Sin and suffering are closely connected. If we would live with any tolerable degree of comfort and satisfaction, virtue is the only rule we have to follow.

“The ills of this world are unequally divided. The human heart is impenetrable to us. They whom we esteem righteous may not be so. The temporary escapes of wicked men may be ascribed to the forbearance of God, who does not instantly punish; or they may discover some signs of reformation hidden from us, but evident to him who is the searcher of hearts. Or there may be a considerable difference in men as to their sense of afflictions, and one may not feel half so much as another, whilst they appear to us to suffer alike. We see many good persons suffer the hardships of poverty and want; and, for all the honest pains they take, are but just able to get necessary conveniences (sometimes not these), and can never awake into plenty and affluence. Others we see who have all things in abundance. Some are born to them, and some arrive at them in a course of business, by a train of lucky incidents, many of whom are, perhaps, wicked and

undeserving. Here things appear to be wrong, unequal, unfit; but another state scatters those apparent improprieties. The good man sees he shall be dealt with there in a way that he shall deserve. This is a great support to him at present.

“What is the reason brutes are subject to suffering? Brutes, as well as man, are subject to the same sort of pains and diseases, so far as their cases coincide. They suffered with man the anguish of the fall. They have perished with him in deluges and conflagrations, in famines, pestilences, and destructions of the sword. As brute animals have attended man in all great and capital calamities, they will also attend him in his final deliverance, be restored when he is restored, and have a place in those happy regions where nature shall assume the splendour and elegance of her pristine form, the eternal God appear as he is, and every thing be representative of him.

“A gentleman had a pointer, which, whenever he went a shooting, he was seen to take out with him. The gentleman’s custom was, on his return from his diversions, to discharge his piece at magpies or carrion-crows, which he would take some pains to look for in the trees as he passed along. The dog on these occasions always kept behind, I suppose, that he might not frighten those birds away, but that his master might have a fair chance at them. It happened one day as he was upon this business, that a magpie, perched on the top of a large oak, escaped the gentleman’s notice. The dog, ever attentive to his

master's pleasures, peeps into the tree himself, and espies the party coloured animal; whereupon he runs up to his master, who was got some yards from the place, lays hold of the lap of his coat behind, and gives it a smart pull with his teeth. The gentleman, surprised, turns about to see what was the matter, when the dog immediately starts back to the tree, and shows him the bird, which the gentleman very soon brought to the ground. I wonder, after such an instance of sagacity, any person can have the effrontery to maintain that brutes are only intelligent machines. Reason declares in favour of the future existence of brutes, by determining that brutes have souls. The notion of a soul includes immortality and endless duration of existence.

"It reflects upon the *goodness* of God, to suppose that he subjects to pains and sorrows such a number of beings which he never designs to beautify; upon his *wisdom*, that he forms them for the miserable duration of a moment, without having himself a power to extend their duration, and better their condition; upon his *love*, that he exposes them to the horrible evils of nature, and the cruel torments of superior beings, which a tender disposition would be concerned to remedy or prevent; and it reflects upon his *justice*, to suppose that he destroys, without a recompense, creatures that he has brought into such a state of infelicity, and in some measure capacitated for everlasting happiness. The notion that brute animals were created only for the occasions of man, to minister to his pleasures, conveniences,

and the like, is a weak and unwarrantable conceit. Every species of animal has a language peculiar to itself, by means of which all the individuals that compose it are able to converse with each other; to impart their pains and pleasures, their fears and dangers, their desires and intentions. And what can all this arise from, but an intelligent principle residing within them?"

And Dr. Adam Clarke makes the following observations in his commentary on Rom. viii.

"I. The brute creation never sinned against God; nor are they capable of it; and, consequently, cannot be justly liable to punishment.

"II. But the whole brute creation is in a state of suffering, and partake of the common infirmities and privations of life, as well as mankind. They suffer, but who can say that they suffer justly?

"III. As they appear to be necessarily involved in the sufferings of sinful man, and yet neither through their fault nor their folly; it is natural to suppose that the Judge of all the earth, who ever does right, will find some means by which these innocent creatures shall be compensated for their sufferings.

"IV. That they have no compensation here, their afflictions, labours, and death prove; and if they are to have any compensation, they must have it in another state.

"V. God, the fountain of all goodness, must have originally designed them for that measure of happiness which is suited to the powers with which he had endowed them. But, since the fall

of man, they never had that happiness, and in their present circumstances never can.

“VI. In reference to *intelligent* beings, God has formed his purposes in reference to their happiness, on the ground of their rational natures. He has decreed that they shall be happy if they will, all the means of it being placed within their power; and if they be ultimately miserable, it is the effect of their own unconstrained choice. Wherefore his purpose is fulfilled either in their happiness or misery; because he has purposed that they shall be happy if they please, and that misery shall be the result of their refusal.

“VII. But it does not appear that the brute creation are capable of this choice; and it is evident that they are not placed in their present misery, through either their choice or their sin; and if no purpose of God can be ultimately frustrated, these creatures must be restored to that state of happiness for which they have been made, and of which they have been deprived through the transgression of man.

“VIII. To say that the enjoyments which they have in this life are a sufficient compensation, is most evidently false; for had not sin entered into the world, they would have had much greater enjoyments, without pain, excessive labour, and toil, and without death, and all those sufferings which arise from its predisposing causes. Nor does it appear that they have much happiness from eating, drinking, and rest, as they have these only in the proportion that they are necessary to their existence as the slaves of men. There-

fore, allowing that they have any gratification and enjoyment in life, they have much less than they would have had, had not sin entered into the world; and, consequently, they have been deprived of the greater portion of happiness designed for them by their bountiful Creator.

"IX. It is, therefore, obvious, that the gracious purposes of God have not been fulfilled in them; and that, as they have not lost their happiness through their own fault, both the beneficence and justice of God are bound to make them a reparation.

"X. Hence it is reasonable to conclude, that, as, from the present constitution of things, they cannot have the happiness designed for them in this state, they must have it in another."

Lloyd. I have read that the system founded by Dr. Gall, called Phrenology or Cranioscopy, which it is contended, that portions of the brain are appropriated to appetites, feelings, and passions, is illustrated in the dog. It is stated by Cuvier, that the dog of New-Holland, "the most stupid and unteachable of the whole race, had an extremely flat forehead, consequently but a small proportion of fore-brain, while the shepherd's dog, and still more the pointer, well known for their intelligence and tractability, had the forehead considerably bulged out, consequently a large portion of fore-brain." It is well known that a large proportion of fore-brain is a general indication of intelligence in the human subject.

Father. If you read professor Rennie's work on zoology, you will there see that he has shown how

strikingly the vision, hearing, smell, taste, touch, and the whole structure of the bodies of animals assimilate to the human frame. A consideration of this would reasonably lead us to suppose, that animals are destined for a higher being than "to feel like man and perish like the dust."

Lloyd. I have read of numbers of instances of the sagacity of animals. A friend of mine informed me that he saw a rat (*Rattus*) place a straw in the mouth of another rat (which appeared to have been blind from old age, as he was quite grey) and lead it to a well close by, where, after having drunk, conducted him back again to his hole. Another instance of the sagacity of these creatures, is, that they have been seen carrying hens' eggs, in the following manner. One of the rats lays down on his back, and with his legs grasps the egg on his breast, while another draws him along by the tail.

Father. What have you been reading during my absence at Bonavista?

Lloyd. I was perusing the package of newspapers Mr. Sweetland sent you; some of them were of old date, but not the less acceptable to a person living in this isolated place. The reading of the papers leaves me without anything further new to peruse; my mind when unoccupied grows sad, and is constantly reverting to kindred spirits and associations. This is one amongst other proofs that solitude is not the natural element of man.

Father. What information did you gather from the papers?

Lloyd. There is not much political news in

them. I read reviews of two new works just issued from the press on Newfoundland, the one by J. B. Jukes, Esq., the other by Sir Richard H. Bonnycastle. I also saw a letter from Mr. Davenport the actor, in defence of the stage, in which he says, "The most pious men have not only patronized but written for the stage. Dr. Young, author of the 'Night Thoughts,' the god-like Addison, our venerated monarch George III., one of the best husbands and fathers that ever lived, was one of its warmest supporters. I could enumerate a host of names; but it possesses one that as long as one stone of the world remains upon another, and one man to contemplate the ruins, can never be obliterated—Shakspeare's." I was not aware that either Dr. Young, the celebrated author of the "Night Thoughts" and the "Last Day," or that the great Addison, so well known in the literary world, had ever patronized the stage.

Father. Dr. Young wrote a tragedy called "The Brothers," which was performed at Drury-lane theatre, about the year 1726; but as soon as he went into orders, the play was withdrawn. About thirty years after, the Doctor consented to have his tragedy acted again at the same theatre. The character of Dr. Young, as a minister, has suffered much from his having consented to have "The Brothers" performed a second time. In mitigation of this circumstance, however, it is stated in Davies's Life of Garrick, that the Doctor formed a design of giving a thousand pounds to the Society for the Propaga-

tion of the Gospel, which he hoped to have been able to have realized from the acting of the play. It is said the profits of the play were insufficient to make good the sum; but that the Doctor made up the deficiency, and so accomplished his benevolent purpose of giving a noble sum for the diffusion of Christianity. Addison lamented the immoral tendency of the stage. He wrote a dramatic piece entitled "Cato," which was never popular on the stage, on account of some of its moral sentiments. There are undoubtedly some noble and moral sentiments in a few compositions of this kind; but they have none equal to the purity of the Christian character; and some of the best have sentiments in them quite inconsistent with it. I do not except Addison's "Cato," of which it is well known Budgell and others made so bad a use. Numerous proofs might be collected in order to show, that in the reign of George III. the theatre was the nursery of the grossest immoralities and vice. Sir Walter Scott says, "Christianity from its first origin, was inimical to the institution of the theatre." This celebrated author, himself a distinguished friend of the stage (for I will not alarm the reader with Puritanical authorities), in his elegant "Dissertation on the Drama," when speaking of the immoral influence of genteel comedy in particular, makes the following concession:—"It is not so probable that the 'Beggar's Opera' has sent any one from the two-shilling gallery to the highway, as that a youth entering upon the world, and hesitating between good and evil, may, for instance, be de-

termed to the worst course, by the gay and
 seductive example of Lovemore, or Sir Charles
 Easy." Parents who place a value on the virtuous
 character of their offspring, and who feel a cor-
 responding alarm at any circumstances which
 might seem to threaten it with such danger, will
 feel the force of the quotation. This one sen-
 tence, from so eminent a critic, they will judge,
 speaks volumes. The moral beauties of Shak-
 speare have been collected and published, but
 what a small proportion they bear to the mass of his
 writings! He had to pander to the vitiated taste
 of the age in which he lived. "He wrote," says
 Dr. Johnson, "without any moral purpose." As to
 the statement that most pious men have sup-
 ported theatrical exhibitions, I do not remember
 to have read of a single individual preeminent
 for piety, having ever attended the theatre; or if
 they did, it formed no part of their piety. Many
 pious persons, who once frequented the theatre,
 are known to have forsaken it as soon as Chris-
 tianity was seen to give a decided turn and emi-
 nence to their character. I refer not to those
 who have been condemned as Puritanical fanatics.
 How oft has this been witnessed in men of taste
 and learning! witnessed from the time of Judge
 Hale, who, when the stage shone forth in all the
 glory which Shakspeare had thrown around it,
 forsook it with the purpose, for reasons which
 he states, never to behold it more, down to
 the present century, when, for instance, the ami-
 able Henry Kirke White, at the bidding of his
 enlightened conscience, renounced the same scene

of poetical enchantment, observing, "I feel much for an uncorrupted frank lad of fourteen, who is permitted to visit this stew of licentiousness, impudence, and vice."

Lloyd. I have seen it stated in some of the papers, that Miss Davenport acts "Richard III." with as much ability as Kean, and that she was honoured with the wearing of his hat. I know something of Richard III. from English history, and I have also read Shakspeare's play of "Richard III.," but I know nothing whatever of Kean. Can you give me any information respecting him?

Father. What I know of him tends in an awful degree to confirm the corrupting and demoralizing influence of the stage. "Edmund Kean was born in the theatre, but yet, unaccountable as it may seem, he is said never to have known with certainty whether it was Miss Tidswell or Miss Carey who was his mother. One of these young actresses sustained this relation to him, but who his father was, it would have been idle to have inquired at all. Kean was, through the whole of his life, a profligate and debauchee. For many years he abandoned his family entirely, and by his crimes compelled other men to abandon theirs. His success as an actor filled his pockets with money, and he squandered thousands upon thousands in every species of dissipation into which man can plunge. On his death-bed a remorseful conscience compelled him to become reconciled to his wife and son, but he died leaving them both beggars.

Such a man was Edmund Kean. He was born, and bred, and died in connexion with the theatre, and in his character we see the legitimate fruits of the influences with which he was surrounded."

We have never yet heard of an actor in his last hours reverting to the happiness a review of his connexion with the stage afforded him. "A lady travelling in a stage-coach with the Rev. James Hervey, was largely expatiating on the play-house, as superior to all other entertainments. Among other things she observed, that 'there was the pleasure of thinking on the play before she went, the pleasure of attending it, and the pleasure of reflecting upon it after her return.' Mr. Hervey told her there was one pleasure she had not mentioned. The lady inquiring eagerly what that was, he answered, 'Madam, the pleasure it will give you on your death-bed.' The lady was so much struck with this well-timed hint, that she forsook the play-house, and set herself to pursue and enjoy those pleasures which would afford her comfortable reflections on her death-bed." Actors in general appear to be happy, merry sort of persons, but under all this apparent gaiety and animation lurks sadness and melancholy. "There is a well-known anecdote of Biancolelli, the celebrated harlequin, whose gambols and drolleries have been the amusement of all Paris, at the theatre of the fair of St. Germain. One day a physician of great eminence in that city beheld a man entering his study, who came, as he said, to seek the assistance of his skill against a disease which nothing could cure. Having made some inquiries

into the causes of his sufferings, the unknown patient replied, that he was afflicted with a deep melancholy, which rendered life an insupportable burden. 'You must drink good wine,' said the physician to his patient. 'I have in my cellar the best wine in the world,' replied the unknown, 'but it cannot make me forget my sadness.' 'You must travel then.' 'I have made the tour of Europe, and still my wretchedness has travelled with me.' 'Oh! oh! the case is sad indeed, but still there is a remedy; go every evening to the Italian comedy; you will see the celebrated harlequin Biancolelli play; his gaiety is catching; that will make you cheerful.' 'Alas, Sir,' said the poor patient, 'I see my malady is incurable; I am Biancolelli.'"

Lloyd. Do the scriptures prohibit the amusements of the stage?

Father. I know of no portion of scripture where the word theatre occurs, any more than the words slave-trade; yet we cannot doubt that the whole tenor of the scriptures condemns both. In the following passage many critics are of opinion that St. Paul particularly refers to the stage: "But fornication, and all uncleanness, or covetousness, let it not once be named amongst you, as becometh saints; neither filthiness, nor foolish talking, nor jesting, which are not convenient: but rather giving of thanks." Eph. v. 3, 4. Other passages might be selected directly at issue with the operations of the stage. The theatre has been condemned by pious men in all ages, and by both Protestant and Roman Catholic writers. If you open that book

laying beside you, you will find it is "A Rational Inquiry concerning the Operations of the Stage on the Morals of Society," by the Rev. David M^c Nicoll, said to be one of the finest essays on the subject in the English language; in which you will perceive he has given a phalanx of authorities against the stage, drawn from Pagans, from states and sovereigns, from Christian councils, from the fathers, and from modern divines and laymen.

Lloyd. I believe Miss Davenport was the first actress that ever performed on the stage in Newfoundland; can you inform me how theatrical amusements originated?

Father. It appears to have been a heathen custom, first commencing with the Greeks, and afterwards introduced among the Romans. "The honour of this grand invention was reserved for a company of rude peasants, who, sacrificing a goat to Bacchus, sang a drinking-song to his praise, a song which was occasionally relieved by a talking interlocutor, and the whole set off by the striking faces of the actors, which were besmeared with the lees of wine; hence, according to some critics, 'wine-lees' gives name to tragedy; and 'to be saucy,' or 'to revel,' gives denomination to comedy."

Lloyd. I perceive in the extract given by the reviewer, from Mr. Jukes's work on Newfoundland, that he met with an old man on the western part of the country who never saw a horse but once, on which Mr. Jukes remarks, "I fear the reader will at first hardly feel disposed to believe that there are British-born subjects, speaking

the English language, in the oldest of our colonial possessions, 'to whom the horse is a strange animal ; such, however, is the fact.'" I do not for a moment doubt the truth of the assertion, but do you not think that such a statement is calculated to impress the minds of the inhabitants of Great Britain with the conviction that the native inhabitants of Newfoundland have not yet emerged from a state of barbarism ?

Father. The statement is in some degree calculated to produce that effect, but as I have not seen Mr. Jukes's work, I do not know what he has said in other parts of it, respecting the inhabitants of Newfoundland. I shall endeavour, however, to get a sight of both Jukes and Bonnycastle's works as soon as I visit St. John's. It is not more strange, however, for Mr. Jukes to meet with an old man on the western coast of Newfoundland, to whom a horse was a strange animal, than for me to meet with an old man in the interior of enlightened England, in the nineteenth century, who had never seen a ship. The only difference between the two is, that the one had seen a horse once, the other had never seen a ship ; the one resided on the sea coast, and obtained a subsistence by the fishery, having nothing to do with agriculture ; the other lived in an inland county, and obtained a livelihood by being employed in agriculture, having nothing to do with nautical affairs. It is a well-known fact, that the English language is spoken with greater purity by the natives of Newfoundland than in most of the country places of England.

Let but an individual make the circuit of the two countries, and he will pronounce the fishermen of Newfoundland to be far before the English peasantry in point of intelligence. It is not to be wondered at, that Newfoundland has advanced so little in the scale of civilization and refinement, when we consider that, for upwards of two hundred years, the policy of the British government had been to prevent settlement and the cultivation of the soil; and it was not until the year 1614 that permanent dwelling-houses were permitted to be erected in the island. A great deal of ignorance prevails in England, even in respectable society, with regard to the real state of Newfoundland. I remember, some years ago, spending an evening at the house of Benjamin Bickley, Esq. at Bristol, where I was introduced to a lady from France, as a person just arrived from Newfoundland. After some time Mr. Bickley said I was a native of the country, which the lady received as mere jest, and it was not until I confirmed the statement of Mr. B. that she could really believe that I was a native of Newfoundland. Although this lady appeared to be acquainted with the existence of the French fishery in Newfoundland, yet she had conceived that the natives were little better than heathens, and differing in their dress and complexion from the Europeans. I went with a friend to see a pottery, but when I was introduced as a native of Newfoundland, who wished to see the operations of making earthenware, the manager treated it as a joke, and actually refused to give any in-

formation, because he said we were only "quizzing" him, notwithstanding my assertions to the contrary. I hope, however, that the publication of the works of Jukes and Bonnycastle will enlighten the British public on the state of Newfoundland.

Lloyd. I have read Mr. Jukes's geological reports, which were laid before the legislature, and I should feel highly gratified by a perusal of his two volumes on Newfoundland.

Father. Do you remember any thing he has said respecting the geological structure of the island? I believe the western part of the country is the most interesting to the geologist.

Lloyd. Respecting the coal formation Mr. Jukes says, "This interesting and important group of rocks resembles in its higher portions the coal formation of Europe, and consists of alternations of shale and clunch, with various beds of gritstone, and here and there a bed of coal. Interstratified with these rocks, however there occur in Newfoundland beds of red marl; and as we descend to the lower parts of the formation, there come in alternations of red and variegated marls with gypsum, dark blue clay with seenite, dark brown conglomerate beds, and soft and red and white sandstones. This inferior portion of the Newfoundland coal formation so greatly resembles the new red sandstone of England (which in that country lies over the coal formation), that it was not till I got the clearest evidence of the contrary, that I could divest myself of the prepossession of its being superior to the coal in this

country also. That nothing might be wanting to complete the resemblance, a brine spring is known to rise in one spot on the south side of St. George's Bay, through the beds of red marl and sandstone. It is certain, however, that in Newfoundland the beds containing coal are above these red marls and sandstones, with gypsum and salt springs, the whole composing but one formation, which it is impossible to subdivide by any but the most arbitrary line of separation. The total thickness of this formation must be very considerable. I by no means have any reason to suppose that I have as yet seen its highest beds, while the thickness which I have seen must amount altogether to at least one or two thousand feet.

"The Humber limestone. This group of rocks lies below the Port au Port shales and gritstones, and in the Bay of Islands it is the one next inferior; I cannot say whether the one graduates into the other, or whether other beds may not be interposed between the two in other localities. The highest part of the Humber limestone which was visible, was a thin-bedded mass, about thirty feet thick, of a hard slaty limestone, of a dark grey colour, with brown concretions, that on a surface which had been sometimes exposed stood out in relief. Below this are some beds of hard subcrystalline limestone, the colours of which are white or flesh coloured, with white veins. These would take a good polish, and would make very ornamental marbles, and from the thinness of the beds are especially adapted for marble slabs. This series of beds has a thickness of

about 200 feet. Below these are a few feet of similar beds of black marble, which rest on some grey compact limestone, without chert, and in very thick beds. This mass of rock forms hills four or five hundred feet high, in nearly horizontal beds. Its upper part continues to be regularly bedded, but in its lower portion all distinction into beds is lost, and the limestone becomes perfectly white and saccharine. This great mass of white marble is frequently crossed by grey veins, so that I cannot say that I saw any block pure enough for the statuary. There is little doubt, however, that in so large a quantity some portions might be discovered fit for statuary marble; and for all other purposes to which marble is applied the store is inexhaustible.

"The hills about the head of St. George's Bay, though rarely exceeding one thousand feet in height, are of a mountainous character, rugged and precipitous; and this continues to the nature of rather a wide band of country that runs from the east of St. George's Bay across the Humber river, at the head of the Bay of Islands, and thence for a considerable distance still farther north. About St. George's Bay this ridge of hills forms the water shed of the country; the brooks on one side running down into the Bay, those on the other emptying themselves into the Grand Pond, a large lake in the interior. This lake commences at about fifteen miles in a straight line N. E. from the exteme point of St. George's Bay. In the first seven miles the lake spreads out to a width of about two miles, and runs about

E. S. E.; at this point, however, it bends round, divided into two branches, each from half a mile to a mile wide, which inclose an island about twenty-one miles long and five across, in the broadest part. In this part of its course the direction of the lake is E. N. E. The remainder of the lake, which is about twenty-five miles long and four or five across, gradually trends round to N. E. and N. E. by N. The whole length of the lake is about fifty-four miles. At its S. W. extremity it is inclosed by lofty hills with precipitous banks, and is of a great depth, no bottom having been found with three fishing lines, or about ninety fathoms. Its depth is further proved by the fact, of the truth of which my Indian guide assured me, that its S. W. half is never frozen over in the hardest winters. Towards its N. E. end it gradually becomes shallow, and the hills slope down into a flat country, which extends as far as the eye can reach towards the N. and N. E. The lake receives on all sides many brooks, and at its N. E. extremity a very considerable river, fifty yards wide and several feet deep, comes in, which is called the Main Brook. Three miles W. of the mouth of this river, an equally considerable one runs out of the pond; this latter is full of rapids for five or six miles, when it is joined by another river of about the same size, which flows from the north-west. These united rivers run toward the S. W. and in about six miles enter Deer Pond, a lake about fifteen miles long, and three or four across, running in a direction about N. E. and S. W. The

S. W. end of this lake is again encircled by the hills, through which the united waters force their way by a narrow and precipitous valley, forming the River Humber, and running out into the Bay of Islands. The part of the river between Deer Pond and the sea is about twelve miles long, from about 50 to 100 yards across, and several feet deep; its navigation is, however, impeded by two rapids, one about three miles from its mouth, and three quarters of a mile long, and another shorter but steeper and more dangerous, about half a mile below Deer Pond. The river which, above Deer Pond, comes in from north and joins that running out of the Grand Pond, is likewise encumbered with rapids, our progress up each branch being stopped half a mile from their junction by rapids utterly impracticable with our boat. I afterwards interrogated the Indians respecting the course of the river in those parts into which I was not able to penetrate myself, and they informed me, that the north branch, which I shall call the Humber, rises in the country near Cow Head, passes down to the E. through several lakes, two of which are eight or ten miles long, and gradually bends round to the S. or S. W. to the spot I have before described. The main brook which runs into the N. E. end of the Grand Pond, is navigable for a canoe for a distance of some miles above the place where I turned back. It is there found to run out of a lake eight miles long; on the other side of the lake the river is again met with, and passing up it three more lakes are crossed, each above six

miles long. The extremity of the last of these is about eighteen miles from Hall's Bay, a branch of the bay of Notre Dame; and crossing half a mile of land another brook is met with, down which a canoe can proceed to the waters of that bay. It thus appears that the country drained by the Humber is upwards of 100 miles from N. to S. and 50 or 60 from E. to W., by far the most extensive system of drainage in the island. It approaches the sea on three points, namely, Cow Head, Hall's Bay, and St. George's Bay, and the united waters force their way out at a point nearly equidistant from each, having either found for themselves, or taken advantage of the narrow pass between Deer Pond and the south branch of the Bay of Islands, called Humber Sound. The Indians likewise informed me, that if they proceeded from the E. side of the Grand Pond, opposite the E. end of the island, a day's journey to the E. brought them to the S. end of Red Indian Pond, a lake between 40 and 50 miles in length, and from that point another day's march to the S. E. brought them to the middle of another large pond of about the same size. Each of these ponds empties itself by a brook into the Bay of Exploits. They each run about in a parallel direction with the Grand Pond, or about N. E. and S. W., and the S. W. end of the third large pond is within a long day's walk of White Bear Bay. It thus appears that there are two easy methods of crossing the country from N. to S. with a canoe. The first by proceeding from St. George's Bay, through the Grand Pond,

to Hall's Bay; the second from White Bear Bay, through the third pond, to the Bay of Exploits.

"In the cliffs near Codroy Island, is much red and green marl, with bands of white flagstone. The white flagstones and the greenish marl contain many veins of white fibrous gypsum, and interstratified with these and the red marls are some thick beds of white and grey gypsum, of a singular character. These gypsum beds are not hard compact sulphate of lime, but are composed of white flakes of that substance, regularly laminated, and interspersed with small flakes and specks, or sometimes thin partings of a black substance, apparently bituminous shale. The whole mass is soft and powdery, thick-bedded, and in considerable abundance, and it might be carried away in boats with considerable facility. I was informed by some Indians of Great Codroy river, that they had seen a bed of coal two feet thick, and of a considerable extent, some distance up the country. Their account of the distance, however, varied from 10 to 30 miles; and I could not induce any of them to guide me to the spot. I proceeded up the river about twelve miles from the sea, and some distance beyond the part navigable for a boat, without seeing any thing but beds of brown sandstone and conglomerate, interstratified with red marls and sandstones, gradually becoming more horizontal and dipping towards the S. E. I believe, however, that a bed of coal had been seen by an Indian on the bank of a brook, running into Codroy river, about 30 miles from its mouth, but that the person who

saw it was not in the neighbourhood at the time of my visit.

"In ascending the brook next above Crabb's River, I found on the sea coast beds of soft red sandstone and red marl, and half a mile up the brook, red and whitish sandstones, interstratified with beds of marl, chiefly red, but also occasionally whitish, green, or blue; beyond that were beds of marl, containing massive grey gypsum, similar to that at Codroy, and a bed of blue clay, containing crystals of selenite. Similar rocks, with now and then a bed of brown or yellow sandstone, occurred throughout the first two or three miles, all dipping N. W. at various angles of inclination. Beyond this point the dip was invariably S. or S. E., and for two or three miles further the character of the rocks was precisely similar to those I had already passed. As, however, the banks of the brook were occasionally low, the section was, of course, not perfectly continuous, and beds which were hidden on one side of the anticlinal line, formed cliffs, and were thus exhibited on the other side. Thus, as I continued to ascend the brook, I came on a cliff of red marl, fifty feet thick, with some thin grey soft micaceous sandstone, beyond which were some beds of grey hardish rock, with nodules of subcrystalline limestone, the banks of the river being likewise covered with a crust, a foot thick, of tufa. Some distance above this, the red sandstones become more scarce, the colour being generally brown or yellowish; grey clunch, too, with bituminous laminæ, was frequent. In one

bank of brown sandstone a nest of coal with a sandstone nucleus was seen. The shape was irregular, and was about two feet long. It most probably was a vegetable remain, squeezed out of all semblance of its former shape. Over this mass of sandstone there was again a good thickness of grey clunch and brown or yellow sandstone, and conglomerate interstratified with red and brown marl, all dipping gently to the S. E. Over these were some thin beds of red sandstone, with red marl, and a little beyond some hard light brown or greyish yellow sandstone, with small quartz pebbles. This rock formed ledges stretching across the river, producing a fall of three or four feet. About 950 yards above this, on the west bank of the brook, was some grey clunch and shale, on which rested a bed of hard grey sandstone, eight feet thick, covered by two or three feet of clunch and ironstone balls, and two feet of soft brown sandstone, with ferruginous stains, on which reposed a bed of coal three feet thick. The dip of these rocks was very slight towards the south, in which direction the bank became low, as it was also on the opposite side of the river, which prevented my tracing the coal further; neither was the bank above the coal high enough to bring in any of the beds over it, and thus give its total thickness, since it is evident the portion here seen may be only the lower part of a bed instead of the whole. The quality of the portion thus exposed was good, being a bright caking coal. The distance from the sea shore is about eight miles; the only harbour, however, is that of St.

George, which is about twenty miles from this spot. A very few rude and imperfect vegetable impressions were all I could see in any of these rocks. Many of the gritstones in this section might probably turn out good freestones. In the next brook to the east of the one I ascended, was formerly a salt spring, which, however, I was assured had lately become quite dry; but several of the little rills which I had tasted in the neighbourhood were brackish."

Father. It appears, from the account given by Mr. Jukes, that St. George's Bay, Bay of Islands, and the neighbourhood of the Grand Pond, are the most interesting and valuable portions of Newfoundland.

Lloyd. Mr. Jukes speaks of a nest of coal he met with, being a vegetable remain, from which I infer that coal was once a vegetable substance.

Father. The origin of coal is generally attributed to vegetable matter. Trees and plants have frequently been discovered in coal mines, the bark of some of which was converted into coal. Mr. Jukes showed me some pieces of slate brought from some of the coal mines of England, on which the impressions of the leaves and stems of plants were distinctly visible. It is supposed that the vegetable matter which produced the coal, was at one time in a state of fluid, heated to a very high degree of temperature. Geologists suppose that it must have taken a period of from 200,000 to 600,000 years to have produced some of the coal fields of England.

Lloyd. I am aware that geology teaches the

nature of the different strata or beds that compose the structure of the earth, and also includes within it the two sciences of Mineralogy and Chemistry; but I am not acquainted with the names geologists have given to the different formations which compose the crust of the earth.

Father. The earth is composed of *unstratified* and *stratified* rocks, to which some geologists have given the following names: *inferior order*, *submedial order*, *medial order*, *supermedial order*, and *superior order*; other geologists have given the following classification: *primitive class*, *transition class*, *secondary class*, *tertiary class*, and *diluvial* and *alluvial* deposits. The *primitive rocks*, contain no organic remains or vegetable petrification. These rocks constitute the groundwork or foundation on which all the other rocks repose, and are supposed to have been the first rocks formed, as they descend lower than all the other formations. They also compose some of the loftiest mountains. The principal rocks of this class are granite, gneiss, and slate of various kinds.

The *transition rocks* or the *Grauwacke group*. These consist of Grauwacke, mountain limestone, and flinty slate. In this class of rocks organic remains first make their appearance. "These consist of organized beings of the lowest orders, such as sea shells of various descriptions, which are here found embedded, and which afford a decisive evidence that such rocks were formed *after* the creation of organized beings." The *secondary rocks* or *cretaceous*, *Oolitic*, *red sand-*

stone, and carboniferous groups. These rocks lie immediately over the transition rocks. The series of this class are the old red sandstone, limestones, new red sandstone, coal formation, chalk, conglomerate, and variegated marl, &c. These rocks contain great varieties of organic remains. "In the Oolitic series are found the wonderful Saurian remains, belonging to species which not only do not exist on the earth at this moment, but could not possibly exist as the surface of the earth is at present constituted. The surface on which the Oolitic group was deposited, appears to have been at various depths beneath that of the sea, and during the deposit itself, the sea seems, from some unknown cause, to have varied in depth at many places. Some of the fossil animals, as the Ichthyosaurus, may have braved the waves of an ocean; but the Plesiosaurus was fitted for the vicinity of land. The Ichthyosaurus, one species of which was full fifty feet long, had the head and breast of a lizard, the snout of a dolphin, the teeth of a crocodile, the spine and ribs of a fish, and the extremities of a whale." Some of these Saurian or lizard tribe were from 70 to 120 feet in length. In the red sandstone the most perfect vegetable fossils have been found, some of them exhibiting the fructification of the plant.

The tertiary rocks, or supercretaceous group. These rocks are supposed to have been deposited after the secondary, and lie above the chalk formation. The tertiary formations are clay, marl beds, gypsum, sand, &c., which appear to have

been alternately sea and fresh water deposits, containing the organic remains of marine shells and fishes, and also of land animals and vegetables; some of which belong to existing genera or species, but most of them belong to extinct genera. "At the plaster quarries in the vicinity of Paris, the gypseous or plaster strata contain very remarkable species of mammalia and other animals, none like which can now be found on the earth. Among them we may mention the *Palæotherium* (signifying the ancient beast), one species of which was shaped like a tapir, and about the size of a horse."

Diluvial and *alluvial* deposits. These are supposed to have been caused by the action of water, air, and the elastic gases upon the previous formations. These deposits form the principal mass of the surface of the earth. *Diluvial* formations consist of blocks of rocks, pebbles, and gravel, spread over the surface of the ground, supposed to have been formed by the last general deluge, because they cover the organic remains of land animals, which are placed in such situations as show them to have been carried thither by the flood. Under the equator are found the organic remains of the north, and in the polar regions are found the remains of animals which, when alive, inhabited the torrid zone. "Some of the most remarkable extinct animals found in diluvial deposits are the mammoth, or more properly speaking, the fossil elephant, and the mastodon, which was at first confounded with the mammoth. In the last century the body of one of these

enormous animals was found buried in ice in the north-east of Asia. It was covered with black hair, under which was a reddish wool; there was a long mane on the neck, and the tusks were larger and more curved than those of the Asiatic or African elephant."

Alluvial deposits are considered to have been formed by causes now in operation, such as the action of rivers and torrents from the mountains, caused by the melting snows, the winds, tides, earthquakes, &c. The alluvial formations consist of sand and beds of loose earth, which are never covered by masses of rocks. Most of the organic remains found in alluvial beds are supposed to have existed since the world was inhabited by man. Most of the fossils found are of existing species, mixed up with some of extinct genera, such as the Irish elk, &c. In the alluvial formations are mostly found the remains of man. The absence of human skeletons in the more ancient strata leads to the conjecture, that the earth was tenanted by a succession of living creatures previous to the creation of human beings.

Lloyd. To what order of rocks do serpentine, hornblend, quartz, basalt, greenstone, porphyry, and trap rocks, all mentioned in Mr. Jukes's geological report, belong?

Father. Hornblend rock, serpentine, and quartz rock, belong to the primitive class of rocks. They are called subordinate rocks, because they are found interstratified with the primitive rocks. The basaltic or trap rocks, greenstone, and porphyry, although belonging to the primitive forma-

tions, are called by geologists volcanic and basaltic rocks. The trap rocks are so called from the appearance of these rocks being cut into steps resembling stairs, which is supposed to be caused by the abrupt or sudden stopping of streams of lava flowing from a volcano. Basalt, greenstone, and porphyry, are all of volcanic origin, the latter of which constitutes some of the highest hills in Conception Bay. The following analysis will show their relation to each other:

	Basalt.	Green-stone.	Phorphyry-slate.
Silica	44.20	46.00	57.55
Alumina	16.75	19.00	23.50
Oxide of iron	20.00	17.00	3.25
Lime	9.50	8.00	2.75
Magnesia	2.25	0.00	0.00
Soda	2.60	3.50	8.10
Water	2.00	4.00	3.00
Oxide of manganese	0.12	0.00	0.25
Muriatic acid	0.05	1.00	0.00
Loss	2.23	1.50	1.90
	103.00	100.00	100.00

It would take up too much time to enter into a description of volcanoes and earthquakes. They have been, however, the most powerful agents in the production of some of the strata that compose the crust of our world. What the internal structure of the earth is composed of, no geologist has as yet been able to explain. The deepest excavation is said not to descend more than a mile below the surface. What kind of substances are to be found a thousand miles in the bowels of the earth, no human being perhaps will ever be able to reveal.

Lloyd. Mr. Jukes discovered bog iron ore and red oxide of iron in Conception Bay, iron stone in Trinity Bay, and strings of copper at Shoal Bay, near St. John's. What class of rocks are the metallic ores found in?

Father. The copper mine at Shoal Bay was first opened in 1775, by some English miners, but was soon after abandoned, in consequence of not paying the expenses attending the working of it. Minerals are principally found in the *transition* and secondary rocks. Gold and silver mines have also been found in the *primitive* rocks.

Lloyd. The Geological Report refers to two chalybeate springs, one in Logie Bay, the other in Pouche Cove. Can you inform me of the nature of these springs?

Father. These springs are called chalybeate, because they contain a portion of iron in solution. Chalybeate springs exist in different parts of Newfoundland. The following is an analysis of the spring at Logie Bay:

"SAMPLE OF SPRING WATER FROM NEWFOUNDLAND.

Specific gravity, at 62 deg. Fahr. 1,000,016,

Solid contents in an imperial pint of 8,750 grains.

1. Chloride of Calceum	... ..	·0419
2. Chloride of Magnesium	... ..	·0400
3. Chloride of Sodium (common salt)	... ..	·3984
4. Sulphate of Magnesia	... ..	·0400
5. Sulphate of Soda	... ..	·0713
6. Carbonate of Magnesia	... ..	·0834
7. Silica	... ..	·1167
8. Vegetable extractive	... ..	·1717
9. Bi-carbonate of Iron	... ..	·0450

Decimals of a grain 9584

"It will be seen that the total solid contents of an imperial pint of this water does not weigh one grain; this is less than I ever met with in a water. They are all common to spring water, except the 1st, 8th, and 9th. The latter it is which will give a character to the spring. It is chalybeate to rather a greater extent than the waters of the 'King's Bath,' in Bath, England. (The King's Bath is the principal spring of the Bath waters.) The Newfoundland spring contains 45-1000ths of a grain in a pint; the Bath spring 30-1000ths; and the chloride of calcium (or muriate of lime when in the water) will contribute to the tonic effect of the iron, while the sulphates of soda and magnesia, although not in sufficient quantity to produce aperient effects, may prove enough to prevent the action which chalybeates have on some constitutions. Upon the whole, I should say that the water might be used with advantage as a general bracer, if arrangements could be made for the accommodation of invalids near the spring; for it must be remembered, that where iron is sustained in water by carbonic acid, as in this case, there is always a tendency for it to fall down as insoluble carbonate of iron, leaving the water without its chalybeate properties.

"WILLIAM HEREPATH.

"Mansion-House, Old Park, Bristol."

The above analysis was obtained by his Excellency, Captain Prescott, the Governor, Dr. Kielley having previously informed him that the water contained some medicinal properties.

Lloyd. I have read that the ancients noticed the various revolutions that the surface of the earth has undergone, and that the Egyptians believed that the world had been subjected to a succession of catastrophes.

Father. The science of geology appears to have been cultivated to a great extent among the Greeks and Romans, but it dwindled into insignificance with the fall of the Roman empire. The study of the science was, however, revived in 1517, owing to a number of petrifications and fossil remains being found in making excavations to repair the city of Verona; since this period the science has been progressing.

Lloyd. Have not certain theories been advanced by philosophers, which have led them to conclude, that the earth, "in its present state, owes its origin to igneous fusion or aqueous solution as the instrumental cause?"

Father. "Geologists who have adopted the former hypothesis are termed Plutonists; of whom Heraclitus, among the ancients, was the leading theorist; and Hook, Buffon, Hutton, Playfair, and Sir James Hall, the chief modern advocates. Those who oppose this system, and maintain the principle of aqueous solution, are called Neptunists, and rank among them the distinguished names of Werner, Saussure, Kirwan, Cuvier, Jameson, and many others. According to the Plutonic system, heat is the cause of the production and perpetual re-production of all things. It supposes a regular alternation of decay, by the operation of the different elements, and of renovation by

subterranean heat at various depths, in such a manner, that by the fusion, recombination, and sublimation of materials, new strata of a more compact and perfect character are continually reared and exhibited. Hence the strata of every period consist of the wreck of a former world. According to the Neptunian theory hydrogen and oxygen being first evolved from chaos, and chemically combined, produced water, which became capable of holding all other substances in solution. From this solution, granite was first consolidated and deposited, its parts being united by a nearly simultaneous crystallization. After this, the other rocks, by a similar law, assumed their respective places in the succession already specified."

Lloyd. Do not the investigations of geologists confirm the statement of the scriptures, that the earth was subjected to a deluge of waters?

Father. The most convincing proofs every where abound of the existence of the flood. The remains of whales and other marine animals have been found on the tops of some of the highest mountains. In Newfoundland large blocks of rock are found resting on the surface of the earth, which are foreign to any of the rocks within many miles of them, and which could have been conveyed there in no other way than by a flood.

Lloyd. Is it not a generally received opinion, that the materials of which the earth is composed, was at one time in a state of fusion, in which millions of beings existed previous to the chaotic state referred to by Moses?

Father. "The coal deposits of a high antiquity,

contain fossil remains of plants that yield the strongest evidence of an extremely hot climate when those deposits were formed." This hot temperature has been gradually diminished to its present state. The different species of organic remains contained in the different strata of the earth, have led geologists to conclude, that no less than four or five distinct epochs of destruction and renewal have taken place, that millions of animated beings have been destroyed by some powerful catastrophe, and their places supplied by other beings, called into life by the creative fiat of the Almighty.

Lloyd. The facts developed by the science of geology appear to be in perfect accordance with the Mosaic account of the creation. The more we look at nature the more we are astonished at its mighty operations and the greatness of the Deity.

Father. In no part of the sacred oracles is it stated at what period of time the world was created. We are informed that man and the present race of beings were created about 6000 years ago. It is said, "In the beginning God created the heavens and the earth," showing that the whole frame of the material universe, with all it contained, had a beginning, that it did not exist of itself or of mere chance, but was brought into existence by the creative energy of God. Moses describes the world as being reduced to order and beauty from a state of chaos, but how long it existed in or previous to the chaotic state we are not informed. Without, then, being at

issue with the statements of the holy scriptures, we are at liberty to extend our views on this subject as far back to periods of past duration, as the facts of geology may warrant. "But why, I would ask," says Dr. Dick, "should the idea of the high antiquity of the earth frighten any persons from acquiescing in it, when it is not in the least repugnant to the declarations of scripture? So far from contracting or distorting our views of the Divine perfections, it tends to expand our conceptions of the plans and operations of the Deity. If periods of duration almost too great for human powers to estimate, have been employed since the original creation of our globe, to bring it to its present state—if vast successive revolutions, at different eras, have taken place upon its surface—if the waters of the mighty deep have at different periods overflowed the solid land—if the place where we now stand was once a portion of the bottom of the ocean, over which its mighty billows for ages had rolled—if subterraneous fires have at different periods raised up from the bottom of the deep those huge mountains which now lift their summits to the clouds—if lofty mountains have been sunk down many thousand feet below their ancient level, so as to form deep valleys or the bottom of the seas—if the Almighty, after creating the matter of our globe, impressed certain laws upon its elementary substances, and left those laws to operate as they now do, with only occasional interferences—if races of animated beings have occupied the globe for myriads of ages—

if new races have been created at different periods and subsequently destroyed—or if numerous orders of intelligent existence may have occupied the surface of the globe ages before man was introduced to this terrestrial scene—if tremendous convulsions have shaken the firm foundations of the earth—in short, if by all the processes to which we have alluded, our globe was gradually prepared for the purposes it now fulfils, and that the Creator chose to employ these rather than the special interposition of miraculous power—such considerations tend to exhibit the power, wisdom, and benevolence of the Deity in a new point of view, and to enlarge our conceptions of the magnificent plans of Him who is the ‘King eternal, immortal, and invisible,’ who is ‘wonderful in counsel and excellent in working.’ We are here shown that the space which has intervened between the present time and the period when man was first placed upon the globe, is but one of the units of a vast series of chronological periods which have gone before, and which stretch backwards into the abyss of immeasurable duration. It is but a single link of the great chain which stretches from the moment when matter first arose from nothing, to diversify the wilds of immensity, down to the hour which is now passing over us. And who knows but that the system of the globe with which we are presently connected, may be but one link in an interminable series of events connected with other orders of intelligences, which will be unfolded during the revolutions of a coming eternity!

"The science of astronomy directs our views to regions of space which are immeasurable by mortals, and perhaps even by intelligences of a higher order, and discloses to our sight ten thousands and millions of magnificent orbs, whose existence was not even suspected 200 years ago. Geology directs our views to a stupendous series of events, stretching back to the ages of a past eternity. The one conducts our vision to the far distant regions of immensity, the other to the immeasurable periods of past duration; the one enlarges our conceptions of space, and the innumerable objects with which it is diversified—the other expands our ideas of time, and the revolutions which have marked its progress. But astronomy has done more than this. Like geology, it extends our views to periods of time, immensely long in the flux of past duration—periods during which thousands of the luminaries of heaven have existed and displayed their radiance. Sir W. Herschel, in his remarks on the nebulæ, has concluded, from a variety of ingenious reasonings and observations, that those nebulæ which assume a milky light or appearance, cannot be less than about 7000 times the distance of the star Sirius, or 168 thousand billions of miles; and from other observations it is inferred, that other bodies in the heavens are removed to a much greater distance. Now light, notwithstanding its amazing velocity of 192,000 miles in a second, would be nearly thirty thousand years ere it could fly from such nebulæ to the earth. Since, therefore, it is a fact, that the

light of such bodies has actually been seen, and, consequently, that it must have been travelling at least many thousands of years before it could have reached the eyes of any of the inhabitants of our globe; it follows, that such bodies must have been brought into existence at far distant periods of past duration, otherwise they could not thus have darted their light through such vast spaces of immensity. The discoveries of modern astronomy likewise disclose to us certain facts which lead us to the conclusion, that certain progressive operations are going forward, analogous to those which appear to have been carried forward in remote ages, in relation to our globe. Had our limits permitted, we might have shown, that some of the comets appear to be in an early stage of their progress towards becoming habitable worlds—that many of the nebulae give evidence of a gradual progression towards condensation—that the appearance of new stars, the disappearance of others which had long shone in the heavens, and the gradual diminution of the light of others—the changes which appear to be occasionally taking place on the surfaces of the sun and the planets, along with other celestial phenomena, are indications that progression towards perfection, and perpetual change, are not peculiar to our world, but are principles in the Creator's government, pervading the wide extended universe.

“But, amidst all the revolutions and catastrophes that have taken place in the constitution of our globe, there is the clearest evidence of

an all-wise and superintending Providence directing every event. Amidst the convulsions which have rent its strata—that have ‘carried hills into the midst of the seas,’ and raised mountains from the bottom of the ocean—there are striking indications of Divine benevolence in preparing our world for the comforts and accommodations its inhabitants now enjoy. The facts disclosed by geological investigations tend to enlarge our conceptions of the attributes of the Divinity, and of the sublimity of his plans and arrangements in the universe; and to demonstrate that his creating power has been repeatedly exercised during countless ages, in calling into existence numerous orders of beings, and in carrying forward his arrangements to a glorious consummation.”

A WALK IN THE MONTH OF JULY.

"DELIGHTFUL Nature! how I love to trace
The various beauties that adorn thy face!
Whether I view thee in the smiling east,
Or turn to greet thee in the glowing west;
Or when the evening shadows first appear,
Or in the zenith of the sun's career;
Where'er I roam thy charms assail my sight,
Adding new lustre with increased delight."

MRS. REDMAN.

It was a lovely morning, the glorious "king of day" was just rising out of the eastern waves, and his golden beams parting the murky clouds, when I took a stroll along the sea shore. The zephyr, with its mild and gentle breeze, scarcely ruffled the placid waters. Looking in the direction of the rising sun, I beheld hundreds of ephemera suns about the size of apples, moving through the air, some blue, some red, some green, and almost every diversity of colour. As I had never observed any thing like this before, I began to rub my eyes, thinking this beautiful phenomenon of nature might have originated from dimness of sight; but after doing so, I saw these little globes more clearly, and the colours appeared more vividly

than before. Casting my eyes upon the dewy grass, every spire appeared decked and strung with diamonds and other precious gems of every hue; every twig was hung with coloured spangles of every variety, and I seemed to be walking upon a field of rainbows. In about half an hour these "short-lived beauties died away."

"Colours are but the phantoms of the day,
 With that they're born, with that they fade away;
 Like beauty's charms, they but amuse the sight,
 Dark in themselves, till by reflection bright;
 With the sun's aid to rival him they boast,
 But light withdrawn, in their own shades they're lost."

What a sublime object is the sun! It has been denominated "the soul of the universe." Astronomers inform us that its distance from our world is 95 millions of miles, its circumference 2,746,600 miles, its bulk 1,300,000 times larger than our world, and 545 times larger than all the planetary bodies taken together. When we think of such an immense body moving along through boundless space at the rate of 60,000 miles an hour, and carrying along with it all the planets of the solar system, it deeply impresses the mind with the wonders of creation, and thoughts of infinity. The sun was at one time supposed to be a body of pure fire, but it is now generally believed to be a solid globe, inhabited by intelligent beings. Without the light of the sun we could not behold the beautiful colours which diversify the landscape, and bedeck the insect's wings. By its beams plants vegetate, and fruits ripen; by its agency the winds are produced, and it assists in regu-

lating the tides. Its heat attracts the waters of the ocean to the atmosphere, from whence it descends in rain to fertilize the earth. Without the influence of this great luminary, our world would be desitute of life, beauty, and enjoyment.

"Great source of day! best image here below
Of thy Creator, ever pouring wide,
From world to world, the vital ocean round,
On Nature write with every beam His praise."

A splendid green dragon-fly (*Libellula*) sprang up from the side of a little rivulet. his wings sometimes shining like silver, and sometimes glistening like gold.

"See the proud giant of the beetle race;
What shining arms his polish'd limbs enchase!
Like some stern warrior formidably bright,
His steely sides reflect a gleaming light:
On his large forehead spreading horns he wears,
And high in air the branching antlers bears:
O'er many an inch extends his wide domain,
And his rich treasury swells with hoarded grain."

In Newfoundland these flies are generally called horse-stingers, though they do not possess the power of stinging. Within the mouth are two teeth covered with a beautiful lip; with these the creatures are said to bite fiercely, but their bite is not venomous. I have captured several, and always found them to be perfectly harmless. There are three or four different kinds of dragon-flies; the largest sort are from two to three inches long. They are considered the most beautiful flies which adorn the face of nature. They possess four wings, which are beautifully transparent,

and their eyes are very large and horny, composed of myriads of little squares, with each a lens set in it. Naturalists have found more than 12,000 in it. It is said that the eye of the dragon-fly has been placed in such a position as to see objects through it, and nothing could exceed the singularity of the exhibition. The steeple of a church which was 299 feet high, and 750 feet distant, appeared no larger than the point of a fine needle; a house was also viewed in the same manner, and the doors, windows, &c. distinctly seen. These insects are produced from eggs, which are deposited in the water by the side of ponds and brooks, where they remain for some time apparently without life or motion. "The larva which comes out of these eggs is six-footed. The only difference between the larva and nymph is, that the latter has the rudiments of wings packed up in small cases on each side of the insect. In this latter state it is supposed that the creature lives at the bottom of the water for a year. It is equally voracious then as in its perfect state. Its body is covered by bits of leaf, wood, and other foreign matters, so as to afford it a complete disguise, while its visage is concealed by a prominent mask, which hides the tremendous apparatus of serrated teeth, and serves as a pincer to hold the prey while it is devoured. Its mode of locomotion is equally curious, for though it can move in any direction, it is not by means of feet, or any direct apparatus that it moves, but by a curious mechanism which has been well illustrated by Reaumur and Cuvier. If one of

these nymphs be narrowly watched in water, little pieces of wood and other floating matters will be seen to be drawn towards the posterior extremity of the insect and then repelled; at the same time that portion of its body will be observed alternately to open and shut. If one of them be placed in water which has been rendered turbid by milk, or coloured with indigo, and then suddenly removed into a more limpid fluid, a jet of the coloured water will be seen to issue from the anal extremity of the libellula to the extent sometimes of several inches; at the same time the force with which the column is ejected propels the insect in the opposite direction by virtue of the resistance with which it meets. Hence it appears that it is by means of its respiratory system that the creature walks—a strange and anomalous combination of functions in one organ.”

Dr. Olinthus Gregory, in his “Letters to a Friend,” introduces the changes of this beautiful insect to illustrate the resurrection of the human body. It is said that the doctrine of metempsychosis, or transmigration of souls from body to body, took its rise from the metamorphoses of insects.

“A plausible argument in its favour might be derived from the seeming revivification of the dead chrysalis, and its apparent reassumption of life might be considered as owing to its receiving for its tenant the soul of some criminal, doomed to animate an insect of similar propensities with those which had defiled his human tenement.”

The balmy breath of the morning was sweet

and refreshing; it was truly a delightful scene, to see the glowing beams of the golden sun, the earth blooming with variegated charms, to hear the plummy warblers of the woods, and all around me blushing beauty and fragrance. Going a little way into the woods, I started a snipe (*Scolopax Gallinago*), and found the nests of two sparrows (*Fringilla Albicollis*) white throat, and (*Fringilla Rufa*) fox-coloured. These birds make their nest in the side of a bank, and lay from four to five beautiful little speckled eggs. A bird's nest is an interesting object, whether we consider the animated creatures it contains, or the workmanship displayed in its structure. In the east some birds' nests are used as food, and is an article of commerce, producing an annual value of £284,290, nearly as much as the seal fishery of Newfoundland.

"It wins my admiration,
To view the structure of that little work,
A bird's nest. Mark it well within, without,
No tool had he that wrought, no knife to cut,
No nail to fix, no bodkin to insert,
No glue to join: his little beak was all,
And yet how neatly finished! What nice hand
With every implement and means of art,
And twenty years' apprenticeship to boot,
Could make me such another? Fondly then
We boast of excellence, whose noblest skill
Instinctive genius foils."

I was soon obliged to retreat from the woods, in consequence of being attacked by swarms of mosquitos (*Culex*). These tormentors of the human race are to be found in every country, and like other warriors have given their name to dif-

ferent places. Probably the name of Mosquito Cove, in Conception Bay, is owing to the swarms of these insects during the time of the earlier settlers. A colony was attempted to be established at Mosquito Cove so early as the reign of James I. By letters patent, dated 27th April, 1610, James I. gave a company of English gentlemen (among whom were Sir Percival Willoughby, Earl Southampton, and Sir Francis Bacon) all that part of the island lying between Cape Bonavista and Cape St. Mary. These gentlemen sent a company of emigrants, under the direction of John Guy, to plant a colony in the newly-granted territory. They arrived at Mosquito Cove, where, after remaining a short time, and their expectations not being realized, the whole party returned to England.

Passing along the sea shore I saw the whole margin of the beautiful beach of Sandy Cove strewn with capelin or lodde (*Salmo Groenlandicus*). They are from four to seven inches in length, the under jaw longer than the upper, the colour of the back is greenish, and the belly silvery. They usually visit our shores, from the latter end of June till about the middle of July, when they deposit their spawn upon the beaches. Chappell says, "The manner of the capelin's depositing its spawn is one of the most curious circumstances attending its natural history. The male fishes are somewhat larger than the female, and are provided also with a sort of ridge, projecting on each side of their back bones, similar to the eaves of a house, in which the female capelin is deficient.

The latter, on approaching the beach to deposit its spawn, is attended by two male fishes, who huddle the female between them, until her whole body is concealed under the projecting ridges before mentioned, and only her head is visible. In this state they run, all three together, with great swiftness upon the sands, when the males, by some imperceptible inherent power, compress the body of the female betwixt their own, so as to expel the spawn from an orifice near the tail. Having thus accomplished its delivery, the three capelins separate, and paddling with their whole force through the shallow surface of the beach, generally succeed in regaining once more the bosom of the deep." Millions of these fish are taken from their native element and laid over the ground as manure. In some parts of the island they form the principal manure of the potatoes. Immense quantities are also used as bait for catching the codfish. They are also salted and dried, and considerable quantities are exported. I saw several star-fish (*Echinus*), and numbers of squid squalls (*Medusæ*), floating on the water. Arriving at a stage, I found some boys had just returned from their morning's fishing; they had about three quintals of codfish (*Gadus Carbonarius*). This is the most valuable of all our fish, being not only delicious to eat, but forming the most important article of commerce of the colony. In spring it comes near the shore in order to deposit its spawn. One female of moderate size is said to contain nine millions of eggs. As these fish were being thrown out of the boat, I ob-

served amongst them several haddock (*Morrhua Aeglefinus*). The haddock is not plentiful in Newfoundland. It is generally caught with the codfish, but is much less in size. It is of a blueish colour on the back; a black line is carried on from the gills on both sides down to the tail; in the middle of the sides under the line, a little beneath the gills, is a black spot on each side, which resembles the marks of a man's finger and thumb; hence the saying so common among the fishermen whenever they catch a haddock, "Ha-dick, I got thee." The dark spots on the shoulder are fabulously said to have been the print of St. Peter's finger and thumb left upon it, while he held it to take out the piece of money referred to in the seventeenth chapter of St. Matthew. The poet thus describes this fish:

"When motionless he lies flat on the strand,
Ah! what avails that Nature's skilful hand
Has deck'd his glossy cheeks with silvery light,
Mix'd with the changing hues of opal bright;
That on his back, with sable ribands graced,
His native waves seem curiously traced;
That, chased in purest gold, his sparkling eyes
Reflect the moving features of the skies;
If vital air supplies him not with breath,
And what gives life to others, gives him death."

Three porpoises (*Delphinus Phocaena*) popped up within a few yards of the stage. John Hollohan immediately got his gun, and I jumped into the boat with him. After rowing a short distance, one of them came up close alongside. John fired, and deposited the load in its side; it sank directly, but the water was so deep that we could not see it. The length of the porpoise is from four to

five feet; the colour on the back is blueish black; the sides grey, and the belly white. The flesh is considered a sumptuous article of food. Their motion in the water is a kind of circular leap. They are found in almost every sea. I have read, that in some parts of America its skin is tanned and dressed with considerable care. It is shaved down from its natural thickness till it becomes transparent, and is then manufactured into articles of wearing apparel: it also affords excellent coverings for carriages. "If we examine," says Lord Brougham, "the structure of a porpoise's head, we find its cavities capable of great distension, and such that he can fill them at pleasure with air or with water. He can sink by blowing from the lungs against the cavities; he can force out the water, and fill the hollows with air in order to rise. No one can doubt that such facts afford direct evidence of an apt contrivance, directed towards a specific object, and adapted by some power thoroughly acquainted with the laws of hydrostatics, as well as perfectly skilful in workmanship."

I saw a gannet (*Pelicanus Bassanus*) on the wing, and several cormorants (*Pelicanus Carbo*), (called shags in some parts of Newfoundland) were sporting about on the water. I now wandered to what is called the "Neck." The edge of the cliff was skirted with alder bushes (*Betula Alnus*). All the rocks in this neighbourhood were covered with vetches (*Vicia*). Several beach-birds (*Tringa Hypoleucas*) were hopping about the rocks. Seeing some persons hauling a net, I

inquired what success they met with, and was informed they had only a single salmon (*Salmo Salar*). These fish have been very scarce at this place (Bird-Island Cove) this summer, not more than four or five having been caught. In some parts of the island, they are very plentiful. They hold perhaps the first rank among fish for delicacy and flavour. The process of spawning is thus described: "A pair of fish are seen to make a furrow by working up the gravel with their noses rather against the stream, as a salmon cannot work with his head down the stream, for the water then going into his gills the wrong way, drowns him. When the furrow is made, the male and female retire to a little distance, one to the one side and the other to the other. Both shed their spawn into the furrow at the same time. This process is not completed at once; it requires from eight to twelve days for them to lay all their spawn, and when they have done they betake themselves to the pools to recruit themselves. Three pairs have been seen on the spawning bed at the same time, and even closely watched while making the furrow and laying the spawn." The quantity of salmon exported from Newfoundland at different periods is as follows:

IN	TIERCES.
1763	694
1795	3,700
1830	4,439
1831	3,606
1832	2,924
1833	3,256
1834	3,369
1836	1,847
1838	4,408
1839	2,922
1840	3,396
1841	3,642
1842	4,715

I sat down on a little grassy hillock, to watch several humble-bees (*Bombus Terricola*), wandering from flower to flower, quaffing the juicy nectar from the field thyme (*Clinopodium Vulgare*), and the white blossoms of the wild strawberry (*Fragaria Virginiana*).

"Hark! the bee winds her small but mellow horn,
Blithe to salute the sunny smile of morn;
O'er thymy downs she bends her busy course,
And many a stream allures her to its source."

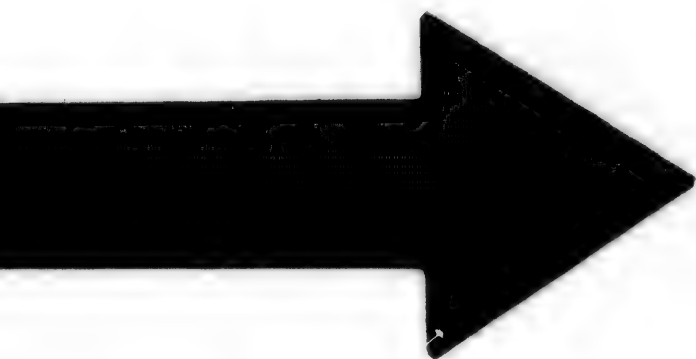
Beneath my feet was an ant-hill, where I observed hundreds of black-ants (*Formica*) running about in all directions, carrying away their young ones in order to conceal them.

Rove-beetles are now swarming every fishing establishment; they are generally called fish-flies (*Staphylinus Villosus*). The white butterfly (*Pontia Oleracea*) now visits the gardens. The horse is tormented at this season by the gad-fly (*Oestrus Equi*). We often observe the legs and shoulders of the horses almost white with little round specks, which are the eggs of the gad-fly. The parent insect deposits its eggs about the shoulders and those parts which can be easily reached by the tongue. The irritation causes the horse to lick the part, when hundreds of these eggs are introduced into the intestines, where they grow to maturity during the ensuing winter, and are ejected in the spring. Another species of gad-fly is said to choose the anal extremity of the horse to deposit its egg. The (*Oestrus Hemorrhoidalis*) when sufficiently advanced falls off the horse, and like the ox-gad-fly, undergoes its changes to full

maturity on the ground. A species of gad-fly is found in the nostrils of sheep, goats, and other animals, and naturalists have discovered a species of this fly which attacks man. It is said to be a native of South America, and about the size of a common house-fly.

July and August are the hottest months in the year in New England, when the thermometer is said to have attained 90 degrees in the shade. The usual temperature, however, at this season is from 75 to 85 degrees. Myriads of insects are now peopling the air, and teeming in the waters. By the aid of the microscope thousands of insects have been discovered in a space not larger than a grain of sand. And the greenish scum which we sometimes see on small stagnant pools of water, is said to be a forest of minute plants, on which more living creatures subsist than there are human beings in the world. Every green leaf swarms with life, every drop of water, corrupted matter, the bodies of other animals, and every humour of the human body, contain tribes of living beings. It is said that the itch is caused by a species of mite (*Acari*). "The insect," says Linnæus, "insinuates itself under the skin, and there produces a little vesicle, from whence it never moves. An experienced eye will readily detect its lurking-place, and an experienced hand as readily removes it with the point of a pin. If it be placed on the nail, it remains immoveable until warmed by the breath, when it runs with great agility. Almost all the vegetable and animal matter used by man is infested by some species of this insect. Dried meat,





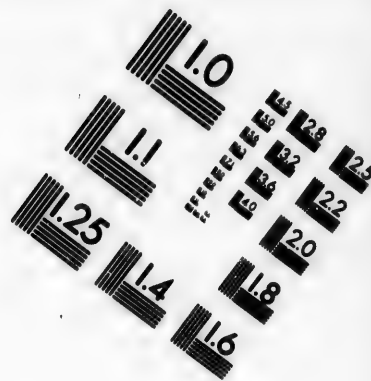
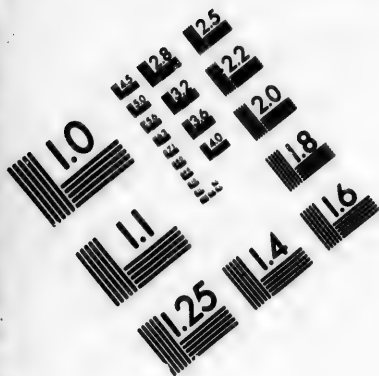
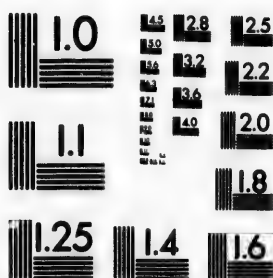


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old bread, flour, sweatmeats, cheese, soon swarm with an extremely minute and active race of mites, any of which, when viewed with the microscope, appear covered with hair."

The tremulous motion observed in the atmosphere during this season is ascribed to the existence of innumerable multitudes of living creatures.

"Full Nature swarms with life; one wondrous mass
Of animals, or atoms organized,
Waiting the vital breath, when parent Heaven
Shall bid his spirit blow. The hoary fen,
In putrid streams, emits the living cloud
Of pestilence. Thro' subterranean cells,
Where scorching sunbeams scarce can find a way,
Earth animated heaves. The flowery leaf
Wants not its soft inhabitants. Secure,
Within its winding citadel, the stone
Holds multitudes. But chief the forest-boughs,
That dance unnumber'd to the playful breeze,
The downy orchard, and the melting pulp
Of mellow fruit, the nameless nations feed
Of evanescent insects."

I passed several beautiful meadows, with their green mantles flowing in the breeze, dotted with the variegated hues of the Timothy-grass (*Phleum Pratense*), red clover (*Trifolium Pratense*), white clover (*Trifolium Repens*), natural clover (*Trifolium Arvense*), and the butter-cup (*Ranunculus Acris*), from which was wafted a most delightful fragrance. I observed several large spots of oats (*Avena*), and a little patch of barley (*Hordeum*). No wheat (*Triticum*), has ever been sown in this neighbourhood, though a few families in the neighbourhood of St. John's raise sufficient wheat to supply them in flour for winter consumption. Winter wheat is said to be better adapted for the climate of

Newfoundland than spring wheat. It is certain that wheat was grown in Newfoundland so early as 1624, and perhaps long before that period. By letters patent in 1623 James I. gave his principal Secretary of State, Sir George Calvert, all the S. E. part of the island lying between the Bays of Placentia and Trinity, which he erected into a province, under the name of Avalon. He planted a colony at Ferryland, and appointed Captain Wynn as governor, who built a large dwelling-house, a granary, and some stores; and in his communications the following year to Sir George, stated, that on the 17th of August, wheat, barley, and oats were eared, and that the various garden vegetables had arrived at full maturity. These cheering accounts induced Sir George, who had lately been created Lord Baltimore, to remove to Ferryland with his family, where he erected a splendid mansion and built a strong fort. After remaining some years, and finding at length that the soil and climate did not come up to his expectations, and his estate being exposed to the attacks of the French, he returned to England; and after obtaining a grant of lands in the state of Maryland, he removed thither and founded the city of Baltimore, which still bears his name. His possessions in Ferryland gradually sunk into decay.

Lord Baltimore was a convert to the Roman Catholic religion, and having relinquished his situation at court, turned his attention to the establishment of the colony of Maryland. He was the first in the western world to proclaim religious liberty to its full extent, and when the

Quakers were persecuted in New England, and the Puritans in Virginia, both found a home in Maryland, where they enjoyed unfettered liberty of conscience, and the free exercise of their religious worship. In 1754 Lord Baltimore revived his claim to the province of Avalon, but in consequence of being so long out of possession his claim was not allowed. Mr. Carter informed me, that some type had at various times been picked up at Ferryland, which were supposed to have been brought there by Lord Baltimore.

The first publication ever issued from the press in Newfoundland was "The Royal Gazette," in 1807, published by Mr. John Ryan. This newspaper is still continued under the same title, Mr. Ryan still being one of its present proprietors. It is a weekly paper, published in St. John's. The following newspapers are also published in St. John's: "The Public Ledger," a semi-weekly paper, established about twenty-four years; "The Newfoundlander," a weekly paper, established about seventeen years; "The Newfoundland Times," a weekly paper, established about twelve years; "The Newfoundland Patriot," a weekly paper, established about eleven years; "The Newfoundland Indicator," a weekly paper, established about four years; "The Star," a weekly paper, printed in St. John's about three years; "The Morning Post," a tri-weekly paper, established one year; and "The Morning Courier," just established.* In Conception Bay, "The Weekly

* Two or three other papers had been established in St. John's, but defunct many years.

Herald," a weekly paper, established two years, is published at Harbour-Grace; and at Carbonear is published "The Carbonear Sentinel," a weekly paper, established about eight years. These, together with "The Farmer's Journal," a quarterly publication, established in St. John's about two years, are the only publications issuing from the Newfoundland press.

Large quantities of rock crystal is found all along the shore from Bird-Island Cove to Cape Bonavista. It occupies the hollow veins of the rocks. Some beautiful clear and transparent crystals are sometimes found in it, called diamonds. I have frequently used them as a substitute for the real diamond to cut glass. Rock crystal is a kind of quartz. "The name of this substance was considered by the ancients to signify ice, or water crystallized; and they imagined that crystal was produced from a congelation of water. Its uses are numerous. It is cut into vases, lustres, and snuff-boxes; and many kinds of toys of extremely beautiful appearance are made of it. When pure and perfectly transparent, it is in much request by opticians, who make of it those glasses for spectacles which are called pebbles, and who use it for various kinds of optical instruments."

The sun had now mounted a considerable height in the heavens. On consulting my watch I found it was nearly breakfast hour, and I had rambled nearly two miles from home. Just at this moment I met old Mr. Wiltshear. Having a little acquaintance with him, I stopped to inquire

respecting his health, &c., when the following conversation took place:

"How long have you been living in this place?"

"About twenty-five years, previous to which I resided several years in Green Bay, and once during that period barely escaped being transported."

"Under what circumstances?"

"In the year 1810, I was living to the northward. Five of us were returning one evening from fishing, when, on rowing round a point, we came close upon a canoe of Red Indians; there were four men and one woman in the canoe. Had we been disposed to have shot them we could have done so, as we had a loaded gun in the boat. The Indians, however, became alarmed, and pulled with all speed to the shore, where they immediately jumped out and ran into the woods, leaving the canoe on the beach. We were within ten yards of them when they landed. We took the canoe into our possession, and carried it home. In the fall of the year, when we went to St. John's with the first boat load of dry fish, thinking a canoe would be a curiosity, we took it with us in order to present it to the governor; but immediately it became known that we had a canoe of the Red Indians, we were taken and lodged in prison for ten days, on a supposition that we had shot the Indians to whom the canoe belonged. We protested our innocence, and stated the whole affair to the authorities; at last the canoe was examined, no shot holes

were found in any part of it, and there being no evidence against us we were set at liberty."

"Did you ever see any of the encampments of the Red Indians?"

"Yes, frequently; I have seen twelve wigwams in the neighbourhood of Cat Harbour. A planter living there built a new boat, for which he had made a fine new suit of sails. One night the Indians came and carried away every sail. The planter and his men, immediately it was discovered, set out in pursuit of the Indians. After travelling nearly a day, they espied them on a distant hill, shaking their cassocks at them in defiance, which were made out of the boat's sails, and daubed with red ocre. Seeing further pursuit was fruitless they returned home. The next day, however, the planter raised a party of twenty-five of us. We proceeded over-land to a place where we knew was an encampment; when we arrived, we found twelve wigwams, but all deserted. Previous to our leaving by land, two men were despatched in a skiff, in order to take us back by water. On approaching near the place of the Indians, they saw a fine goose swimming about a considerable distance from the shore. They immediately rowed towards it, but the goose began to swim towards the shore; they began to row faster to overtake it, when one of the men happened to see something dark moving up and down behind a sand-bank. Suspecting all was not right, they immediately pulled from the shore, when they saw two Indians rise up from concealment, who immediately discharged their

arrows at them, but they were at too great a distance to receive any injury. After the sails had been taken, the Indians, expecting a visit, placed these two of their party to keep watch. The goose was fastened to a string in order to decoy the men in the boat near the shore, so as to afford the Indians an opportunity of throwing their arrows at them. The two Indians on watch communicated intelligence of the arrival of the boat to the encampment; hence the cause of the forsaken wigwams when we arrived."

"How large were the wigwams?"

"They were built round, and about thirty or forty feet in circumference. The frame consisted of small poles, being fastened together at the top and covered with birch rind, leaving a small opening for the escape of the smoke. Traces of their encampments are still to be seen along the Cat Harbour shore, consisting of large holes, &c. being left in the sand."

"Did you ever hear of any of the Indians having been taken?"

"Yes; during the time the circumstance occurred which I have stated, Lieut. Buchan, in H. M. schooner Pike, was commissioned by the Governor, Sir John Thomas Duckworth, to discover and, if possible, bring about a friendly intercourse. He succeeded in discovering an encampment, and prevailed on two of the Indians to go on board his vessel, leaving two marines with the Indians as hostages, while he proceeded in search of another party. But as Lieut. Buchan did not return at the time appointed by him, the Indians,

suspecting cruelty about being practised upon them, murdered the marines and fled. When Lieut. B. returned to the spot, and not finding his men, the two Indians he had taken with him immediately decamped, and were never heard of afterwards. Several years after this, two or three Indians, who had been driven to the coast by hunger, were taken and carried to St. John's. I recollect seeing two Red Indians when I was a boy, at Catalina; their names were William June and Thomas August (so named from the months in which they were taken). They were both taken very young, and one of them went master of a boat for many years out of Catalina."

"I remember reading something of Lieut. Buchan's expedition. Do you think any of the Red Indians now exist in the country?"

"I am of opinion that, owing to the relentless exterminating hand of the English furriers and the Micmac Indians, that what few were left unslaughtered made their escape across the Straits of Bell Isle to the Labrador."

"Do you know any thing of the Micmac Indians?"

"Yes; I have lived several winters in Clode Sound, in the bottom of Bonavista Bay, where several families of them constantly resided. They obtained a subsistence by selling fur. They lived in wigwams constructed very similar to those of the Red Indians. During my residence in the Bay, several Micmacs had gone to Canada, by way of Labrador, and returned again. The last family belonging to this tribe residing in Bonavista Bay,

was lost last summer (1841). An old man, his wife and son, were coming down the Bay in their canoe; they had some rum on board, of which they drank freely, when the father and son fell fighting; the son was thrown overboard by the father, and drowned. He then gave directions to his wife how to manage the canoe, and plunging into the sea swam a considerable distance and sank. The woman immediately took the canoe to the nearest cove, where she was supported by the inhabitants until she died."

Seeing some black clouds gathering, portending a shower, I took my leave of the old gentleman and hastened home, where I arrived quite invigorated and refreshed, after so delightful a morning's walk.

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THE THUNDER STORM.

"A THUNDER storm! the eloquence of heaven,
 When every cloud is from its slumber riven,
 Who hath not paused beneath its hollow groan,
 And felt Omnipotence around him thrown?
 With what a gloom the ushering scene appears!
 The leaves all fluttering with instinctive fears,
 The waters curling with a fellow dread,
 A breezeless fervour round creation spread,
 And, last, the heavy rain's reluctant shower,
 With big drops pattering on the tree and bower,
 While wizard shapes the bowing skies deform,
 All mark the coming of the thunder-storm."

R. MONTGOMERY.

Tired of the dull monotony of Bird-Island Cove, I felt disposed to accompany a friend as far as Bonavista (five miles distant). We commenced our journey at nine o'clock, A. M. The sun shone with unclouded splendour, and the sweet morning breeze was pouring fresh life and animation on the whole animal and vegetable creation. Our road lay along the sea shore, skirted on either side with birch (*Betula Alba*), willows (*Salix*), wild roses (*Rosa Blanda*), and (*Rosa Parviflora*), and the blue iris or wild flag (*Iris Versicolor*). Nature was clad in her best attire; all was beautiful to the eye; and a stillness reigned around

which was friendly to contemplation, for the breeze scarcely moved the thick foliage, and nought was heard save the hum of the insect, and the notes of the feathered tribe, emulous to proclaim their Maker's praise. On arriving on the top of a hill about half way, we had a beautiful view of the surrounding country. On the west spread out before us were hill and dale richly clothed with the charms of summer. South of us appeared the large Island of Baccaïieu, and the south shore of Trinity Bay, just emerging out of the water, like specks on the verge of the horizon. On the north appeared Bonavista Bay, covered with small fishing boats, traversing its splendid and ample waters in every direction; and on the east appeared the long swell of the mighty waves of the great Atlantic Ocean. All the little banks were blooming with hurts (*Vaccinium Uliginosum*). After walking about a mile from this we arrived at Spillard's Cove. As yet this place is uninhabited. The principal cause, I have been informed, is that a vessel had been lost here some years ago, when several dead bodies were picked up and buried here. A superstitious dread rests upon the minds of the people of the surrounding settlements, and no one is ever caught near this place after sunset.

"Strange things, the neighbours say, have happen'd here;
Wild shrieks have issued from the hollow tombs,
Dead men have come again and walked about.
Such tales their cheer, at wake or gossiping,
When it draws near to witching time of night."

The land surrounding this Cove has a very rich appearance, and the earth is more like English

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soil than any I have ever seen; here I think agriculture may be pursued to a great extent, and much more advantageously than in many other parts of the island. A small brook flows into the bottom of this Cove, by the side of which is a considerable quantity of bog iron ore, and red oxide of iron is to be found in several places. A few hundred yards from the Cove is a gulley or small pond; the whole surface of the water was covered with the leaves of the beaver root (*Nuphar Luteum*). Amongst the rushes (*Scirpus*) by the side of the lake we observed a musk-rat (*Avicola Zibethicus*), sporting and enjoying himself. The flesh of this animal is frequently eaten. I have seen the skin kept in a trunk amongst clothes, in order to communicate the smell of musk, which it will retain for years after the death of the animal. Berries were in abundance, amongst which were scarlet stoneberries (*Cornus Canadensis*), wild gooseberries (*Ribes Cynosbati*), wild currants (*Ribes Ringens*), and here and there we observed some wild cherries (*Prunus Borealis*); but the fruit was not ripe. These berries are indigenous. Going a short distance to pick some wild pears (*Pyrus Melanocarpa*), we started a bittern (*Ardea Minor*).

After feasting our eyes with prospects, and our minds on Nature's wondrous works, we arrived at Bonavista, when I partook of the good cheer of my friend, with his hospitable family; after which (owing to the fatigue of the walk and the heat of the day) we both sank into a profound slumber. Awaking, I found that the shades of

the evening were hastening on, and that I had five miles to travel before I reached home. I now took my leave of my friend, and set forward on my journey. I had not proceeded beyond a quarter of a mile before I observed vast masses of black clouds collecting and advancing in the direction in which I was going; in about ten minutes the most awful flash of lightning I ever beheld appeared for a few seconds; it seemed to reach from the earth to about mid-way in the sky, and for the time appeared like a line of stationary fire. The whole atmosphere became illuminated, and an aged man just passing by me at the time, declared he never saw any thing like it before. It was similar to a spark I have seen produced with the electrical machine. I have observed, if the knuckle be held a distance from the prime conductor, it draws a zig-zag spark, but if it be brought nearer the conductor, it elicits a perfectly straight spark. This is exactly like the flash of lightning I am describing, only upon a small scale. Immediately after this flash the thunder roared in loud and lengthened peals, and the rain descended in torrents. I pursued my journey, followed by the storm. Presently the loudest clap of thunder I ever heard burst over my head. It was like as if the firmament was being broken up. To say I felt no fear at this time would be untrue. I was overcome by a nervous agitation, and stood still in the midst of this awful storm, deliberating whether I had better turn back or keep on my journey. Some might have been glad of such an opportunity

of beholding Nature moving forth in her majesty, but I decided on taking to my heels and running back as fast as I could, while the vivid lightnings played around me, and the loud thunder roared over my head.

"O, now to be alone, on some still height,
Where heaven's black curtains shadow all the sight,
And watch the swollen clouds their bosoms clash,
While fleet and far the living lightnings flash,
To mark the caverns of the sky disclose
The furnace-flames that in their wombs repose,
And see the fiery arrows fall and rise,
In dizzy chase along the rattling skies,
How quakes the spirit while the echoes roll,
And God in thunder speaks from pole to pole!"

After running for about half an hour, almost breathless, I sat down on a rock to recover myself, when I saw the storm was passing away. Presently a beautiful rainbow arched the sky, and the bright beams of the sun once more shone upon me. A thick fog then set in, and after resting about ten minutes, I got up and again resumed my journey homewards, where I arrived the same evening, having sustained no further injury than a wet jacket.

On Saturday last (July 22nd) nature was what a Turkish writer designates in "her frolics and her rants." About four o'clock in the afternoon, the sky appeared much disturbed, masses of black and dense clouds had collected together, and were advancing from the south-west. In the space of half an hour, the lightning's glare lit up the whole atmosphere, the thunder rattled along the vaulted sky, and the rain fell in torrents. The clouds were within what is called the *striking distance* from the

earth. After they passed Bird-Island Cove, they began to vomit globes of fire, which had the appearance of clouds studded with fiery suns, alternately appearing and disappearing for about the space of an hour. At Bonavista the electric fluid struck the mainmast of a fishing boat, and descending the backstay, tore from the wash-board an iron bolt, and thence passed through the boat's side, when she immediately filled with water. Fortunately she was at her moorings, and all the crew were on shore. The hole made by the lightning was perfectly round, and about an inch in diameter, around which was deposited a blackish kind of matter. The matter deposited by lightning has been examined, and found to contain iron, sulphur, and carbon. Dr. Skelton informed me, that the thunder and lightning was most terrific, accompanied with wind, hail, and rain; that in the immediate vicinity of Bonavista, it appeared like a shower of fire, and that twenty currant bushes in his (Dr. S.'s) garden were destroyed. It has been the heaviest thunder-storm known in Bonavista for the last sixteen years. At that time the lightning entered a dwelling-house in the form of balls of fire, and tore the walls asunder; it forced up a large stone hearth and shattered it to pieces; the chimney was demolished—the doors were unhung or split to pieces—and the windows were all destroyed, the glass in one of which was completely melted, through which the electric fluid escaped. It traversed the ground, leaving deep furrows, and shivered to pieces a block of gritstone, six feet in diameter,

and then passed into the earth. The rock seems to have undergone a species of fusion, as traces of it are still to be seen. Happily no human life was lost.

Thunder-storms are very frequent in the northern parts of Newfoundland, but are less known in the southern parts. They are, however, seldom agents of destruction. I believe not more than two or three instances are known of individuals having been killed by lightning in Newfoundland. The velocity of sound in atmospheric air is at the rate of 1142 feet per second; if, therefore, the instant we see a flash of lightning we count the number of seconds before we hear the report of the thunder, and multiply the number of seconds by 1142 feet, the rate at which sound moves, we have the distance of the thunder.

"It has been demonstrated, by the sagacity of Doctor Franklin, that thunder and lightning is merely a case of electrical discharges from one portion of the atmosphere to another, or from one cloud to another. Air, and all gases, are non-conductors; but vapour and clouds, which are composed of it, are conductors. Clouds consist of small hollow bladders of vapour, charged each with the same kind of electricity. It is the electric charge which prevents the vesicles from uniting together, and falling down in the form of rain. Even the vesicular form which the vapour assumes is probably owing to the particles being charged with electricity. The mutual repulsion of the electric particles may be considered as

sufficient (since they are prevented from leaving the vesicle by the action of the surrounding air, and of the surrounding vesicles) to give the vapour the vesicular form. In what way these clouds come to be charged with electricity, it is not so easy to say. But as electricity is evolved during the act of evaporation, the probability is, that clouds are always charged with electricity, and that they owe their existence, or at least their form, to that fluid. It is very probable that when two currents of dry air are moving different ways, the friction of the two surfaces may evolve electricity. Should these currents be of different temperatures, a portion of the vapour which they always contain will be deposited; the electricity evolved will be taken up by the vapour, and will cause it to assume the vesicular state, constituting a cloud. Thus we can see, in general, how clouds come to be formed, and how they contain electricity. This electricity may be either vitreous or resinous, according to circumstances. And it is conceivable, that by long-continued opposite currents of air, the charge accumulated in a cloud may be considerable. Now when two clouds, charged, the one with vitreous and the other with resinous electricity, happen to approach within a certain distance, the thickness of the coating of electricity increases on the two sides of the clouds which are nearest each other. This accumulation of thickness soon becomes so great as to overcome the pressure of the atmosphere, and a discharge takes place, which occasions the flash of lightning. The noise accompanying the dis-

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charge constitutes the thunder-clap, the long continuance of which, partly depends on the reverberations from neighbouring objects. It is, therefore, loudest and largest, and most tremendous, in hilly countries. These electrical discharges obviously dissipate the electricity; the cloud condenses into water, and occasions the sudden and heavy rain, which always terminates a thunder-storm."

A piece of sealing-wax, glass, or sulphur, being rubbed with a piece of dry woollen or silk, in a dark room, will emit a faint light, and it will attract small scraps of paper, or other light substances towards it. The effect thus produced is called electric. The electrical machine consists of nothing more than a large glass cylinder or globe, being turned rapidly round by a winch, and made to rub against a silk cushion. During its revolution, streams and large sparks of fiery fluid will be elicited, which flashes around the glass. A portion or charge of this fluid being received on a glass jar (coated on both sides with silver, or tin-foil), and the hand being applied to the top of the jar, a violent contraction or blow of the muscles will be felt, producing a shock that may be received at the same moment by a hundred persons, by joining their hands. The bodies over which electricity passes freely are all metals, most animal and vegetable substances, water, &c.; all which are called *conductors* of electricity. But it will not pass over oil, glass, sulphur, resin, wax, charcoal, silk, baked woods, or dry woollen substances; nor through

the air, except by force, in sparks, to short distances. All these bodies, are, therefore, called *non-conductors*. Electricity is an agent that seems to pervade all nature. It tends to purify the atmosphere, assists the vegetation of plants, and increases the insensible perspiration of animals. Philosophers inform us, that it is the principal agent in the production of earthquakes, volcanoes, whirlwinds, waterspouts, and hurricanes, and many other natural phenomena. Electricity has been drawn from the human frame, and I have read, that a short time previous to death, flashes of electricity have been emitted from the human body. It is employed with success to cure various diseases, and it has been known to restore the blind to a temporary enjoyment of sight. Minute and lengthened descriptions of the wonderful operations of electricity are given in the "Encyclopedia Britannica," arts. Thunder, Electricity, and Cloud.

The following lines were written by Walter Scott, when he was between nine and ten years of age, and while he was attending the High School at Edinburgh. His master there had spoken of him as a remarkably stupid boy, and his mother with grief acknowledged that he had spoken truly. She saw him one morning, in the midst of a tremendous thunder-storm, standing still in the street, and looking at the sky. She called to him repeatedly, but he remained looking upwards, without taking the least notice of her. When he returned into the house, she was very much displeased with him. "Mother," he said,

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"I could tell you the reason why I stood still, and why I looked at the sky, if you would only give me a pencil." She gave him one, and in less than five minutes he laid a bit of paper on her lap, with these words written on it:—

"Loud o'er my head, what awful thunders roll!
What vivid lightnings flash from pole to pole!
It is thy voice, my God, that bids them fly,
Thy voice directs them through the vaulted sky.
Then let the good thy mighty power revere,
Let harden'd sinners thy just judgments fear."

Bishop Lowth, while pursuing his studies at Winchester, gave effusion to the first specimen of his poetic genius, in the following beautiful stanzas, composed as he lay in bed during a thunder-storm.

"Lock'd in the arms of balmy sleep,
From every care of day,
As silent as the folded sheep,
And as serene I lay.

"Sudden tremendous thunders roll,
Quick lightnings round me glare;
The solemn scene alarms my soul,
And wakes the mind to prayer."

As some of my young friends may often have occasion to go from home, without the slightest knowledge of what sort of weather they might expect before they return, I will here introduce a table by which they may pretty nearly tell the state of the weather at every quarter of the moon, with remarks upon it from the pen of the late Dr. Adam Clarke. He says, "Many a time, even in tender youth, have I watched the heavens with anxiety, examined the different appearances of the morning and evening sun, the phases of the moon,

the scintillation of the stars, the course and colour of the clouds, the flight of the crow and the swallow, the gambols of the colt, the fluttering of the ducks, and the loud screams of the sea-mew, not forgetting even the hue and croaking of the frog. From the little knowledge I have derived from close observation, I often ventured to direct our agricultural operations in reference to the coming days, and I was seldom much mistaken in my reckoning.

"About fifty years ago, a table, purporting to be the work of the late Dr. Herschel, was variously published, professing to form prognostics of the weather by the times of the change, full, and quarters of the moon. I have carefully consulted this table for several years, and was amazed at its general accuracy; for though long, as you have seen, engaged in the study of the weather, I never thought that any rules could be devised liable to so few exceptions. When on those maxims I have been able to give to my neighbours and friends directions relative to their field operations, even in fickle and dangerous times. I have often been led to glorify God for the discovery of the principle on which this table is constructed, and frequently said, 'If Dr. Herschel had lived for no other purpose than this, posterity would have reason to bless his memory.' But how was I surprised, when, some time ago, I was informed that his son had come forward and disclaimed the table as any work of his late father, and as being unworthy of him! Well, great, most certainly, was Dr. Herschel,

If the New Moon, the First Quarter,
, the Full Moon, or the Last Quarter,
happens

and honourable to himself and his adopted country, were the discoveries which he made; and had the above principle and its application been among them, he would, in my sight, have yet greater honour. However the thing may be, the table, judiciously observed, may be of great public benefit. I have made a little alteration in the arrangement, given it a significant name, and illustrated it with further observations."

TABULA EUDICHEIMONICA;

OR, THE

FAIR AND FOUL WEATHER PROGNOSTICATOR:

BEING

A TABLE FOR FORETELLING THE WEATHER THROUGH ALL THE LUNATIONS OF EACH YEAR FOR EVER.

This Table, and the accompanying remarks, are the result of many years' actual observation, the whole being constructed on a due consideration of the attraction of the sun and moon in their several positions respecting the earth; and will, by simple inspection, show the observer what kind of weather will most probably follow the entrance of the moon into any of her quarters, and that so near the truth as to be seldom or never found to fail.

	TIME OF CHANGE.	IN SUMMER.		IN WINTER.	
		IN SUMMER.		IN WINTER.	
If the New Moon, the First Quarter, the Full Moon, or the Last Quarter, happens	Between Midnight and 2 in the Morning	Fair	.....	Hard frost, unless the wind be S. or W.	
	2 and 4	Cold with frequent showers	.....	Snow and stormy.	
	4 and 6	Rain	.....	Rain.	
	6 and 8	Wind and rain	.....	Stormy	
	8 and 10	Changeable	.....	Cold rain if wind W.	
	10 and 12	Frequent showers	.....	Snow if E.	
	At 12 o'clock at Noon and to 2 p. m.	Very rainy	.....	Cold and high wind.	
	Between 2 and 4 After.	Changeable	.....	Snow or rain.	
	4 and 6	Fair	.....	Fair and mild.	
	6 and 8	Fair if wind N. W.	.....	Fair.	
		Rainy if S. or S. W.	.....	Fair and frosty if the wind be N. or N. E.	
				Rain or snow, if S. or S. W.	
	8 and 10	Ditto	.....	Ditto.	
	10 and Midnight	Fair	.....	Fair and frosty.	

OBSERVATIONS.

1. The nearer the time of the Moon's change, First Quarter, Full, and Last Quarter, are to Midnight, the fairer will the weather be during the seven days following.

2. The space for this calculation occupies from ten at night till two next morning.

3. The nearer to Midday, or Noon, these phases of the moon happen, the more foul or wet the weather may be expected during the next seven days.

4. The space for this calculation occupies from ten in the forenoon to two in the afternoon. These observations refer principally to summer, though they affect spring and autumn nearly in the same ratio.

5. The Moon's change, First Quarter, Full, and Last Quarter, happening during six of the afternoon hours, i. e. from four to ten, may be followed by fair weather, but this is mostly dependant on the wind, as it is not noted in the Table.

6. Though the weather, from a variety of irregular causes, is more uncertain in the latter part of autumn, the whole of winter, and the beginning of spring, yet in the main the above observations will apply to those periods also.

7. To prognosticate correctly, especially in those cases where the wind is concerned, the observer should be within sight of a good *vane*, where the four cardinal points of the heavens are correctly placed. With this precaution he will scarcely ever be deceived in depending on the Table.

8. It need scarcely be added, that to know the exact time of the moon's changes, quarters, &c. a correct Almanack must be procured.

With this Table and a good barometer, to what a certainty may we arrive in prognostications concerning the weather! By these the prudent man, foreseeing the evil, will hide himself, and will feel the weight of the proverb, "Make hay while the sun shines." By not paying attention to the signs and the seasons many have suffered, and charged God foolishly, because he did, not change the laws of nature to accommodate their indolence and caprice.

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A RAMBLE IN AUTUMN.

"SWEET is the slow wane of autumnal hours
 Subsiding into winter; and the whole
 Of nature beautiful, when all her powers
 And charms, in living poetry unroll,
 Dash'd with the hues of heaven, and inspiration's soul!"

GOUGH.

THE glories of summer are now hastening away; nature is laying aside her old robes to be clothed with all the fragrance and beauty of another spring. The leaves of trees and shrubs are beginning to assume a variety of colours, rich and beautiful. The coldness of the weather produces this scene of glowing colours, arising from the leaves taking in oxygen during the night, and being too feeble to open their pores for its escape during the day. It is said, that the oxygen thus confined, unites with the materials of the pulp, producing various acids, whose known action is to change blues to reds, "and consequently when the blue carbon becomes thus tinged it produces various shades of orange and other combinations of red and yellow." The falling leaves have frequently been compared to the human race passing away.

"All we love and feel on Nature's face
 Bear dim relations to our common doom.
 The clouds that blush, and die a beamy death,
 Or weep themselves away in rain—the streams
 That flow along in dying music—leaves
 That fade, and drop into the frosty arms
 Of Winter, there to mingle with dead flowers—
 Are all prophetic of our own decay."

The vegetable creation, having gone through the operations of springing, flowering, and feeding, have at length brought into existence the embryo of a future generation, which are now being committed to the earth. Buds are now formed and contrived by an all-wise Providence, to keep off the cold of winter, by being provided with a shell similar to that of an egg. Instead, then, of buds being formed in spring, as is supposed by some, they are formed in autumn, and only expand in spring. The seeds of plants are now wafted along by the breeze, and deposited in some favourable spot for germination. The seeds of the thistle (*Cnicus Arvensis*) are provided with downy wings for the purpose of being borne along by the wind. These winged seeds are seen flying in every direction during a breeze. In this we see the wisdom of God, in making a provision for another race of plants. Although these weeds are of little value to man, yet they constitute the food of birds and various tribes of insects.

A fine large brook, flowing over a rocky declivity, falls into the bottom of Bird-Island Cove. Following the windings of this stream, I arrived at its source, a beautiful lake of water, about one mile long and a half mile broad, which was

covered with withered white lilies (*Nymphaea Alba*) and yellow lilies (*Nuphar Advena*).

"Ah! look on the lilies! they tell not, nor spin,
Yet earth's proudest monarch, array'd
In the utmost of pomp that ambition can win,
Their beauty and grace might upbraid."

The banks of the lake were skirted with fine woods, amongst which the graceful birch (*Betula Papyracea*) appeared very conspicuous.

"Most beautiful
Of forest trees, the lady of the woods."

This tree is the most useful of any in Newfoundland. It is used for ships' timbers, and sawed into planks. Hoops, tables, chairs, staves, blocks, and a variety of cabinet work are made out of it. A great portion of this timber is consumed as fuel. Its wood is also drawn into small grassy strips, out of which hats are made. Its twigs are made into brooms, and are frequently cut for cattle to browse on. I have seen several beds made of the outer bark, which were considered by the persons who possessed them as equal to feather beds. The canoes of the red Indians were made out of the bark of the birch, being sewn together with the elastic roots of trees, and the sinews of the deer; some of their cooking utensils were also formed of its wood. The largest birches in Bonavista Bay are from 16 to 32 inches in diameter. The birch is often tapped by persons who are engaged rinding in the spring. An incision is made with a hatchet in the side of the tree, from which issues a small stream, when they are enabled to allay their

thirst. I have been informed, that the sap has a very sweet sugary taste. It is very probable that it would form an excellent vinegar. I have read that the peculiar scent of the Russian leather is owing to the bark of the birch with which it is tanned; and a subsequent finish with an essential oil distilled from the same tree. In high northern latitudes, the inner bark is ground, and in times of scarcity used as a substitute for flour. The Laplanders make waterproof boots without seams from the trunk of the tree. Having read that the bark of the birch was made use of by the ancients for tablets, and that some of the books which Numa composed and wrote on this material, were found in perfect preservation when his tomb was opened, after a lapse of four hundred years, I selected some very fine smooth pieces of the outer bark, and found that the pen glided over it with as much facility and ease as over a fine sheet of letter paper. The birch sends forth a very sweet, pleasant smell, which is said to be highly beneficial in disorders of the lungs. This tree, clothed with its silvery drapery, is certainly the queen of our forest trees.

Close to the edge of the water I observed a solitary small aspen (*Populus Tremula*), its leaves trembling in concert with the agitated waters of the lake. This wood attains a considerable size, but is hardly ever used, except for the purpose of building wharves. A legend is told, that of this tree the wood was taken that formed the cross of our Saviour, and that since then its leaves can never rest.

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"Far f in Highland wilds, 'tis said,
 (But ruth now laughs at fancy's lore)
 That of this tree the cross was made,
 Which erst the Lord of glory bore,
 And of that deed its leaves confess
 E'er since a troubled consciousness."

Pine (*Pinus Strobus*) is seldom met with in this neighbourhood. Great quantities of pine are sawed into boards, in the bottom of Bonavista Bay, and also in Green Bay. In the latter place a saw mill has lately been erected. Pine is the largest of our forest timber, but is small when compared with the stately trees of the neighbouring continent. Our largest pines seldom attain a larger size than from 18 to 34 inches in diameter.

Walking on a little further I met with a mountain ash (*Pyrus Aucuparia*), covered with beautiful coral red berries, which are exactly like the various parts of an apple, and may be said to be one in miniature. This tree is the prettiest ornament of our groves in autumn. The berries are generally called "dog-berries;" by some, however, in Newfoundland, they are called "pig-berries." Large bags full of them are sometimes picked in autumn, and preserved for Christmas, as when they have been frosted they are very sweet and pleasant tasted. I saw some of these berries when I was at Trinity church last winter (1843), ornamenting the tops of several pews. Bears are said to be very fond of them, and will climb the tree and bend down the top in order to get at them. When these berries are very plentiful, it is remarked by the people of this place (Bird-Island Cove), as a presage of a

severe winter. The timber of the mountain ash is hardly used for any other purpose than that of making handles for edged tools, owing to the small size the tree generally attains. This tree adorns several of the gardens in the suburbs of St. John's, and graces many dwellings in other parts of the island. "The rowan-tree or mountain ash, had formerly many superstitious virtues and associations connected with it. It is conjectured that the expression in Shakspeare, 'Aroint thee witch!' should be read, 'A rowan-tree witch;' and from the arguments adduced, the latter appears the most probable reading. However that may be, the rowan-tree is rapidly losing its mysterious and superstitious character, although some lingering remains may still be occasionally met with, of the wondrous magic potency thereunto attributed. It is still supposed, in sequestered districts especially, to have the power to avert the 'evil eye.' Education is fast dispelling its celebrity as the 'witchen tree,' but its beauty and elegance will continue to charm when its superstitious virtues are entirely forgotten."

The black duck or mallard (*Anas Boschas*) is now sought after in the ponds. This is said to be the origin of the domestic duck. Passing through a lot of ground juniper or savine (*Juniperus Sabina*) and sarsaparilla (*Avalia Medicaulis*), I fell into a thicket of hazel nuts (*Corylus Avelana*); they were nearly ripe. I picked a quantity of them, the performance of which was unpleasant to the fingers, from the effects of the minute prickles attached to the husks. They generally grow by

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the side of brooks and other moist places. In some parts of the country they are very plentiful. About four miles in the woods from Carbonear I have seen groves of them. Several trees were brought from the woods and planted in a garden, but from the dryness of the soil they were found not to thrive.

Pursuing my course round the edge of the pond, I observed all the banks studded with snake-root (*Serpentaria*). The Indian pipe or Indian cup (*Sarracenia Purpurea*) grew in all directions. I noticed some beautiful pink flowers, called in Canada, Indian wickup (*Epilobium Latifolium*), and the white plumes of the cotton grass (*Eriophorum Virginicum*) were waving over the marshy places. Probably this plant could be cultivated so as to become valuable. I knew an individual who collected from one marsh sufficient cotton to use as wick for an oil lamp during a winter.

I now ascended what is called the "Green Ridge," which is perfectly barren, except its base, which also presents nearly a naked aspect, owing to a fire which happened there some years ago. The burnt part was plentifully stocked with raspberry bushes (*Rubus Idaeus*). Some of the berries were still on the trees, but quite insipid to the taste. It is found to be the case all over Newfoundland, that where the woods have been consumed by fire, the first thing that springs up after is the raspberry bush. This is singular when we consider that the soil had been previously occupied by birch, spruce, and fir trees. I have consulted several botanical works in order to ascertain the

cause of this, but could meet with no satisfactory explanation. Of course the seed must have been conveyed to the burnt spot; possibly the seed may have been deposited in the ground many years before the fire had taken place. It is said that wheat found with mummies 3,000 years old, has been made to germinate.

Mr. Lindley says, books contain an abundance of instances of plants having suddenly sprung up from the soil obtained from deep excavations, where the seeds must be supposed to have been buried for ages. Professor Henslow says, that in the fens of Cambridgeshire, after the surface has been drained and the soil ploughed, large crops of white and black mustard invariably appear. Miller mentions a case of *plantago psyllium* having sprung from the soil of an ancient ditch which was emptied at Chelsea, although the plant had never been there in the memory of man. De Candolle says, that M. Gerardin succeeded in raising kidney-beans from seeds at least a hundred years old, taken out of the herbarium of Tournefort; and I have myself raised raspberry-plants from seeds found in an ancient coffin in a barrow in Dorsetshire, which seeds, from the coins and other relics met with near them, may be estimated to have been sixteen or seventeen hundred years old.

Walking over the Ridge, I found the whole surface covered with large blocks of gritstone, basalt, and isolated fragments of old red sandstone, tossed into various and fantastic shapes, as if by some violent convulsion of nature. The

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whole of this neighbourhood evidently indicates the existence at one time of some mighty earthquake or volcano. I now had a fine view of the surrounding country; in the valley beneath me were several fine sheets of water, encircled with woods glowing with the diversified colours of autumn.

"The fading many-colour'd woods,
Shade deep'ning over shade, the country round
Imbrown! a crowded umbrage, dusk and dun,
Of every hue, from wan declining green
To sooty dark."

The waters of Bonavista Bay were to be seen about seven miles distant; the schooners and boats floating on the water assumed shapeless forms, and appeared flying in the air, and the islands on the north side of the Bay seemed hanging over the sea, without foundation; all the rocks and islands along the coast appeared twice their usual elevation, and parts of the coast at other times invisible, were now distinctly seen. This is what is called looming, and is a sure presage of an easterly wind. At Carbonear, I have frequently viewed the strange appearance of the south shore of Conception Bay when looming, through the glass. Images of every variety and form have appeared, and constantly changing; little boats have appeared like great mountains, lifted out of the water and moving through the air. The weather was always fine, but rather hazy whenever I have seen this phenomenon. Looming is of the same nature of the mirage. These appearances are caused by the irregular refractions which the rays of the light sometimes

experience in a peculiar state of the atmosphere. The only difference between the mirage and looming is, that the mirage is caused by two reflections, and sometimes three, from the intermediate vapour and the inverted images of objects that are not within the horizon appears. Whereas the looming is produced by one reflection, and the reflected objects are not inverted, but merely lifted up. These appearances are frequent in warm countries. I have read, that in sandy deserts, when the traveller has been weary and thirsty, exposed to the burning sun, the reflected image of the sand has appeared as a beautiful lake of water, and frequently the traveller has hastened his pace in order to reach it, the sooner to allay his thirst; but the more he advanced towards it, the farther it appeared from him, till at last it disappeared, and showed the disappointed traveller it was all deceit. Few that have frequented the sea, who have not heard sailors speak of the spectre of the flying Dutchman, which they regard with superstitious awe, the origin of which is said to be the mirage.-

Descending from the hill, a few drops of rain fell, when I observed a lovely rainbow span the sky.

"Refracted from yon eastern cloud,
Bestriding earth, the grand ethereal bow
Shoots up immense, and every hue unfolds,
In fair proportion running from the red,
To where the violet fades into the sky."

The rainbow or iris is formed by the rays of the sun falling on drops of rain, being reflected.

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and refracted to the eye of the observer. Sometimes there are two rainbows seen at the same time, the outer one more faint than the inner one. The rainbow may always be seen when the rain is falling, the sun shining, and the rain falling before the spectator, and the sun behind him. Rainbows may be seen on the spray of a waterfall, dew drops, and spiders' webs; sprinkling water from any vessel will also produce them. The rainbow has often been observed on the top of a crested wave; this is called the marine rainbow; but none of these bows can be perceived unless the sun be shining on the drops, and the observer has the sun behind him, and the drops of water before him. A very indistinct rainbow is sometimes seen by moon-light, called the lunar rainbow. It has been demonstrated by Sir Isaac Newton, that all the variegated colours which beautify the face of nature, are all composed of the seven primary colours of the rainbow, and that every beam of light consists of these colours.

"Of parent colours, first the flaming *red*
 Sprung vivid forth; the tawny *orange* next;
 And next delicious *yellow*; by whose side
 Fell the kind beams of all-refreshing *green*.
 Then the pure *blue*, that swells autumnal skies,
 Ethereal play'd; and then of sadder hue,
 Emerged the deepen'd *indigo*, as when
 The heavy skirted evening droops with frost.
 While the last gleamings of refracted light
 Dy'd in the fainting *violet* away."

The rainbow was placed in the clouds as a pledge of the fidelity and infinite mercy of God.
 "I do set my bow in the cloud, and it shall be

for a token of a covenant between me and the earth." (Gen. ix. 13.)

What Peter Martyr has said upon the subject of the rainbow is richly deserving of particular attention. "The bow (says he) is a military instrument. Upon making leagues, and concluding a peace, neither arrows nor the string bent are to be seen; but the soldiers carry it, with its horns or extremities down to the earth; but it is otherwise in the time of battle; then they draw its horns together towards their face, that, aiming with the eye, they may throw their arrows at the enemy. In like manner, God being reconciled, has taken out the string, removed the arrows, and turned the horns down to the earth; thereby assuring us that his anger is appeased." Ambrose, upon the words, "I do set my bow in the clouds," says, "not his arrow, but his bow. The bow cannot hurt us, but the bow forewarns us of the arrow; and the string of the bow is to us-ward, to show how unwilling God is to punish; he must first turn the bow and fix the arrow, before he can shoot at the mark. This arrow being unprepared, indicates him to be the Father of mercies." Concerning the colours of the rainbow, Peter Martyr proceeds as follows: "From the matter, which is water, and from the nature of the colours, it appears to be a suitable symbol. For by this, God has promised, that for the future he would so order the waters, that they should not destroy all things: but what represses or restrains water more than heat, both contained in, and signified by light?"

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Grotius observes, that the three colours of the rainbow represent the severity, mercy, and goodness of God. Another learned man thinks, that the colours of the rainbow, red, fiery, and green, signify a mixture of holiness and mercy by means of blood; that both these being manifested by the shedding of blood, may render God venerable and lovely in our eyes on account of these perfections of his nature.

I now arrived where I commenced my journey; and sauntering along the sea shore, I passed several females gathering maiden-hair (*Adiantum Pedatum*). This plant is used as a tea during the summer and autumn. It is very wholesome, and has a very agreeable flavour.

I saw several puffins (*Fratercula Arctica*) sailing about on the water. A considerable number of these birds breed on the Northern Bird-Island, and are frequently captured in the burrows, where they form their nest. The eider duck (*Somateria Mollissima*) is seldom seen along this coast; though in some parts of the island it is plentiful. The down of the eider duck is an important article of commerce. In the northern latitudes, where it is very plentiful, this bird is much sought after, on account of its feathers, and also as an article of food. "The nest is placed on the ground, and constructed of marine plants, thickly lined with soft down, which the female plucks from her own breast, and disposes around her, so as to form an elevated ridge, which falls in and covers the eggs the moment she leaves them. As long as the female is sitting, the male con-

tinues out at sea, returning in the evening to his mate, whom it is not improbable he relieves during the night. The downy lining of the nest, which is so much prized, is thus secured. As soon as the nests are made, and a number of eggs deposited in them, the collectors go round and carefully remove the female, who seems so absorbed in her duty as to lose all sense of danger. They then take away the down and superfluous eggs, and after this replace her. She then reconstructs her nest, and lays afresh, when a second robbery takes place, and a third time does she proceed to the task with untired patience, assisted by the male, who is now obliged to furnish the greater part of the down himself. If the unjust robbery be again repeated, they generally leave the place; it is therefore usual to permit them to proceed with the task of incubation. The quantity of down thus obtained from a single female is said to amount to half a pound, which is reduced one half by the process of cleaning. "This down," says Shaw, "is of such value, that, when in its purity, it is sold in Lapland for two rix-dollars a pound; it is extremely soft and warm, and so light and expansive, that a couple of handfuls squeezed together are sufficient to fill a quilt five feet square."

I found the north point of Bird-Island Cove covered with blackberries (*Empetrum Nigrum*). These berries form the autumnal food of the curlew (*Numenius Longirostris*) and the plover (*Charadrius*). These birds are now very plentiful;

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their flesh is delicious, and they are the fattest birds we have in autumn.

The fishing-ground was dotted with a number of boats trying for fish. Dog-fish (*Squalus Acanthias*) are now plentiful; the hallibut (*Hippoglossus Vulgaris*) and thornback (*Raia Clavata*) are occasionally caught; the squid or cuttle-fish of Penzance (*Sepia Artica*) has now nearly disappeared from our shores. The squid that visits us possesses from eight to ten arms or suckers, by which it fastens to any substance, and with which it grasps its prey. When any of these arms are destroyed it has the singular power of re-producing them. This animal is from five to six inches long; the colour is a greenish red, and it is luminous in the dark; they appear like so many pieces of gold darting through the water in the night, leaving after them a fiery train. They dart backward as well as forward, and are furnished with a bag in the hind part of the body, containing a blackish fluid or ink; this fluid is a means of defence to the animal; when pursued, the animal ejects this ink in order to conceal itself. It is also a source of annoyance to the fishermen; the moment the squid is drawn from the water they "squirt," as it is termed, ejecting the black fluid in the face, and over the clothes of the fishermen. Some writers affirm, while others deny, that this fluid formed the ink of the ancient Romans, and the principal ingredient of the Chinese or Indian ink. The organic remains of this animal have been found in the secondary rocks, with the ink bags preserved. The flying-

squids (*Sepia Loligo*) in some seas are seen like flying-fish, rising out of the water in flocks and passing through the air a short distance; sometimes they fall upon the decks of vessels. Mr. Clouter informed me, that some years ago, he saw at Bonavista an arm of a squid twelve feet long, with a proportionable thickness. I have read, that one of these huge animals threw his arms or suckers across a small boat, and in spite of every effort drew down the boat and crew. The squid or cuttle-fish is known in almost every sea. It is considered a luxury by the Sandwich Islanders; and the Red Indians of Newfoundland esteemed it a great delicacy, it being generally eaten raw by them. The squid is rarely eaten by the inhabitants of Newfoundland, being generally considered as unfit for food. It is, however, a well-flavoured fish, and is excellent either broiled or fried; it tastes very much like the large claws of the lobster. Immense numbers of squids visit our shores in August, and remain until nearly the last of September. They are usually caught with a small jigger, though when they are plentiful they will fasten on to any thing put into the water. The use to which they are applied, is bait for catching the cod-fish: they also form an excellent manure.

The next bait for catching the cod-fish which the fishermen resort to after the departure of the squids, are the lance (*Amnodytes Tobianus*); these fish also form the earliest bait in the spring on the northern coast. They are very much like an eel, and are from three to six inches long.

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Generally, when the squids and lance leave the coast, the herring (*Clupea Harangus*) makes its appearance. This is a most prolific fish; its fecundity is wonderful. The herring will produce in one season from 20,000 to 30,000 young. It has been calculated that if the offspring of a single herring could be suffered to multiply unmolested and undiminished for twenty years, they would exhibit a bulk ten times the size of the earth. But they have innumerable enemies. They are caught in vast numbers by man, and many animals of the deep, besides vast flocks of sea-fowl. Herrings are thought to breed in the polar seas, and are said to leave their icy home towards the latter end of winter, soon after which they divide into two distinct bodies, one of which moves westwards and pours along the shores of America; while the other directs its course to Europe, and swarms the shores of Great Britain. The herrings visit our shores during the months of April and May, September and October; when great numbers are taken. They are generally caught in nets during the night, and form one of the principal articles of food of the poor of Newfoundland. An immense number of herrings are consumed in the island; every poor family who has the means of procuring them, have no less than from two to twelve barrels (according to the number in family) preserved for winter consumption. A great number of herrings are cut up and used as bait for catching the cod-fish. The quantity of herrings exported at different periods is as follows:

IN	BARRELS.
1795	1,000
1830	1,083
1831	1,799
1832	1,814
1833	3,039
1834	1,823
1836	1,534
1838	15,276
1839	20,806
1840	14,686
1841	9,965
1842	13,839

Mr. Chambers, in his "Tour in Holland, in 1838," makes the following remarks: "The Dutch greatly excel in the art of curing herrings. The herring in a salted state, is the animal delicacy of Holland, and enjoys a very different estimation from that of the common salt herring in Britain, yet the fish of both countries are the same, being caught in the same fishing grounds, and there is no reason why our herrings should be in any respect inferior in quality and mercantile value. There are about eighty vessels employed in the Dutch herring fishery, nearly all of which belong to Vlaardingen and Maassluis, two ports on the Maas, situated between Rotterdam and the sea. The fishing is conducted on an organized plan. All the vessels set sail on a fixed day, namely, the 15th of June, which is held as a day of rejoicing and merriment. They are accompanied by a vessel of war, which carries a chaplain for the fleet, and to this vessel, at the beat of a drum, the fishermen proceed on Sundays for public worship. The fishing grounds are towards the northern coasts of Scotland, but

agreeably to a law of old standing, no vessel is expected to approach within three leagues of the shore. The first day that nets are allowed to be hauled is the 24th of June, when the fishing at once commences in all its vigour. The whole process of curing is conducted on shipboard. Immediately on being caught the herrings are bled, gutted, cleaned, salted, and barrelled. The bleeding is effected by cutting them across the back of the neck, and then hanging them up for a few seconds by the tail. By being thus relieved of the blood, the fish retain a certain sweetness of flavour or delicacy of flesh, which unbled herrings cannot possibly possess. The rapidity of the process of curing must likewise aid in preserving the native delicacy of the animal, for the herring is salted and in the barrel in a very few minutes after it has been swimming in the water. The superiority of the Dutch herrings, I was assured, is solely ascribable to this mode of curing."

In order to test the Dutch mode of curing herrings, I procured a barrel containing four hundred, which were treated in the manner described by Mr. Chambers. They were certainly the most delicious herrings I ever tasted. If this method of curing were adopted in Newfoundland, the advantages would soon be apparent by the increased price and demand for our herrings; and our herring fishery, instead of being, what it is now, a mere auxiliary to the cod-fishery, and of secondary consideration, would advance and become one of the most important and valuable fisheries.

The cured cod-fish (*Gadus Morrhua*) and (*Gadus Carbonarius*) are now being shipped off to the merchants by the fishermen, when these fish are re-shipped, and sent away to foreign markets for sale. Cod-fish is the great staple article of the country, affording the means of subsistence to nearly the whole population of the colony. The quantity of cod-fish cured and exported at different periods is as follows:

IN	QUINTALS.
1763	386,274
1785	591,276
1795	600,000
1814	1,200,000
1830	948,463
1831	755,667
1832	619,177
1833	883,536
1834	763,187
1836	860,354
1838	724,515
1839	865,377
1840	915,795
1841	1,009,725
1842	1,007,980

The quantity of fish taken by the French in 1842, is said to be 1,400,000 quintals; thus making the total quantity exported in that year to be 2,407,980 quintals.

The potatoes (*Solanum Tuberosum*) are now nearly ripe. They are generally sown in the month of May and the beginning of June, and are dug up and deposited in the cellars, from the winter frost, in October. Newfoundland produces some of the finest potatoes of any country in the world, and which is one of the most important articles

of food used in the country. Herrings and potatoes form the principal diet of the poorer classes of the colony, and a more hardy or better looking race of men are not to be found upon the face of the globe. This proves the excellence and wholesomeness of the diet. It has been demonstrated that man will live much longer, and acquire a greater degree of strength, on potatoe diet than on bread. Dr. Hawkins, in his "Medical Statistics," states, that in the department of Indre, in the province of Touraine, upon the Loire, one-fourth of the children born, die within the first year, and half between fifteen and twenty, and that three parts out of four are dead within fifty years. Dutrochet, an eminent physician in that department, remarked, in a conversation with Mr. Knight, the president of the Horticultural Society, that the extraordinary mortality was occasioned by the food, which consisted chiefly of bread, and of which he calculated that every adult peasant ate two pounds a day. He added, as the result of his own experience, that if the peasantry would substitute a small quantity of animal food with potatoes, they would live much longer.

Most of the inhabitants of Bird-Island Cove make their starch from the potatoes. A quarter of a bushel will make a pound; the process is very simple. The potatoes are first peeled, then grated over a tub of water, into which the potatoe falls; when a sufficient quantity is grated, it is well stirred about in the tub with the hand; it is then taken and strained through a piece of fine calico or muslin, and let remain in a dish

for a day, after which the starch is found in a thick, tough, white coat on the bottom of the dish, and the water floating on the top; the water is then thrown off, and the starch taken and put into a small bag and hung up to dry. In the early part of the summer, I have known the tops of the potatoe stalks to be used as a substitute for cabbage. The potatoe belongs to a class of plants which are poisonous, and though the tubers or roots of the potatoe are good and wholesome, yet the potatoe-apple is said to be slightly poisonous, and it is said that the liquor in which potatoes have been boiled, imbibes an injurious quality, and they ought never to be used in soup or stew. "Chemists have found, by analysis, that 100 parts of the potatoe, when deprived of its skin, contain 68 to 72 parts of water, and 28 to 32 parts of insoluble matter, consisting of starch, fibrous matter, and soluble mucilage, which together constitute the flour, the amount and quality of which depend greatly upon the mealiness of the root." Mr. Crew (who keeps six head of cattle) informed me that he always dries the potatoe-stalks, or haulms, as fodder for his cattle during the winter season. He said, about two and a half hundred weight of potatoe-stalks went as far as one hundred weight of hay. Potatoes are very generally mixed up with flour, and manufactured into bread; and potatoe flour makes excellent puddings. It is said that potatoes three-fourths boiled, make a good substitute for soap, and also may be used as a substitute for coffee and chocolate. I have read that

brandy, gin, sugar, and cheese, have been made out of the potatoe. John Hollohan informed me, that last year (1843) he sowed one barrel of seed potatoes, out of which he had the extraordinary increase of forty-one barrels.* They were sown in the usual way, and manured with kelp. This constitutes the principal manure used in this neighbourhood. It is generally taken from the beach about Christmas, and laid over the ground for the following spring; and the people say better crops are produced by this mode, than if the manure were laid on in the spring.

The first time potatoes were cultivated in Bonavista was about sixty years ago. The quantity produced there in 1843 was 45,000 bushels. According to the returns in 1836, the quantity of potatoes raised in the island was 1,188,437 bushels. Probably nearly double that quantity is now raised.

In 1584 our Queen Elizabeth sent out a fleet to "discover and plant new countries not possessed by Christians." Thomas Heriot, the mathematician, was one of these adventurers. He returned with the rest, two years after his departure, and it has been supposed that to him we are indebted for the first knowledge of the potatoe, as he describes an American plant, called *openawk*, thus:—"The roots of this plant are round, some as large as a walnut, others much larger; they grow in damp soils, many hanging together as if fixed on ropes. They are good

* A barrel contains about two and a half bushels.

food, either boiled or roasted." Sir Walter Raleigh, whose tragical and undeserved fate is one of the numerous stains upon the conduct, not the reign, of James I., introduced the potatoe into Ireland on his return from the expedition to North America, in which he colonized Virginia. The story is, that he reared the plant on his estate, near Youghall, county Cork, where it grew and bore flowers; that his gardener, having gathered the "apples" as the fine fruit which his master had brought from abroad, carried them to Sir Walter, who ordered the plants to be rooted out. The man accordingly dug them up, but finding a large quantity of tubers, the plants were saved from destruction. Many and various observations have been made upon this story, in order to ascertain whether Sir Walter knew which part of his foreign treasure was edible; but it is not worth our while to enter at length upon this matter. Other accounts state, that the potatoe was not introduced into Ireland until the year 1610; while some writers affirm that the people of that country were in possession of it at a much earlier period. This, however, may refer to the Spanish *Battata*, or sweet potatoe, which is said to have been carried to Ireland by Captain Hawkins, in that year. The sweet potatoe is mentioned by Gerard in his Herbal, published 1597, as the *Sisarum Peruvianum*. He describes it as growing in India, Barbary, and Spain, recommending it for conserves and sweatmeats. For this purpose the root was used in the time of Shakspeare. Gerard also men-

tions the common potatoe as *Battata Virginiana*, giving an accurate description of both plant and flower. The potatoe was brought to southern Europe by a different channel. Clusius received it during his residence at Vienna, in 1598, from the governor of Mons, in Flanders, who had procured it the year preceding from Italy, under the name of *Taratouffli*. For some time after its introduction into this country, the potatoe was planted in the gardens of the nobility as a curious exotic. In the reign of James I. it was considered as a delicacy, being provided in small quantity for the queen's household, at the price of two shillings per pound. Through the succeeding reign and the Commonwealth, it remained extremely scarce, nor did its cultivation spread till more than a hundred years after the discovery of Virginia. Mr. Buckland, a Somersetshire gentleman, drew the attention of the Royal Society to its value in case of famine, by a letter in 1663. Such members as had lands adapted to its culture were entreated to plant the new vegetable, and Evelyn was requested to mention it in his *Sylva*; but so little was this admirable practical gardener aware of its importance, that he took no notice of it till thirty years afterwards; and then in his "*Kalendarium Plantarum*," (the first gardener's calender published in Britain) in the following cursory manner: "Plant your potatoes in your worst ground; take them up in November for winter spending; there will enough remain for a stock, though ever so exactly gathered." This root, thus slightly noticed by

a writer as celebrated for his careful research as the man was for his unwearied benevolence, forms at the present day the chief food of the peasantry of Ireland. The progress of the vegetable was but slow in England, notwithstanding the zeal of the Royal Society; but in Ireland, at the end of the seventeenth century, potatoes were much used as bread; and a writer on the gardening at that time says, they "may be propagated with advantage to poor people." Ray scarcely mentions the potatoe; and in the *Complete Gardener*, published by London and Wise in the succeeding century, it is not noticed at all; of so little importance was it thought, that Bradley says, it is "of less note than horse radish." The potatoe was not made the object of useful culture in Scotland till 1728, when a labouring man, named Thomas Prentice, near Kilsyth, in Stirlingshire, cropped the little plot of ground from which he partly drew his subsistence with potatoes. The neighbouring cottagers, and afterwards the farmers, seeing the value of the crop, followed his example. Prentice himself gathered together sufficient money to retire upon an annuity, "having been for sixty-four years a witness to the happy effects of the blessing which he had been instrumental in conferring on his country." The culture of the potatoe in the rest of Europe appears not to have attained to any extent till during the last century. It was introduced into Sweden in 1720; but notwithstanding the exertions of Linnæus, it did not come into general cultivation till aided by a royal edict in 1764. In

Switzerland it met with more favour; the inhabitants in a few years growing not only sufficient potatoes for their common consumption, but drying them and grinding them into flour for bread. In Poland also the potatoe is cultivated to an extraordinary extent. In some parts of India, especially Bengal, the cultivation of the potatoe has been introduced with every prospect of success; it was at first very unpopular, but is now regarded as a valuable article of food. Attempts have been vainly made to cultivate this root in Ceylon. That island is in general too hot, and it thrives in one spot in the interior only, whence a basket full is sent every morning for the supply of the governor's table."*

Cabbage (*Brassica*), turnips (*Brassica Rapa*), carrots (*Daucus Carrota*), parsnips (*Pastinaca Sativa*), peas (*Pisum Sativum*), beans (*Phaseolus*), onions (*Allium Cepa*), garlic (*Allium Sativum*), and the other garden vegetables have now arrived at full maturity. The horse-mackerel or tunny-fish (*Scomber Thynnus*) is at this season seen revelling in its ocean home. I was not aware of the existence of this fish on the coast of Newfoundland, until I saw two at Bonavista, which were purchased in the bottom of the Bay, where they are just beginning to be used as an article of food. The two that I saw were each about ten feet long, some of which I eat, which was equal if not superior in flavour to the common mackerel. Few in Newfoundland are aware that the horse-mack-

* See "New Library of Useful Knowledge."

erel. constitutes a sumptuous article of food, or that it is even fit to eat. This fish was well known to the ancients, and highly valued as a most important food. From the earliest ages it constituted a great source of wealth and commerce to the inhabitants of the Mediterranean. It ought to be generally made known, that the tunny-fish is a valuable article of food, as they are abundant along the coast of Newfoundland during the summer and autumn, when great numbers may be taken. The common mackerel (*Scomber Scombus*) has deserted the shores of Newfoundland about seven years, none having been caught, I believe, since 1837. They used to be equally abundant as the herrings. An old inhabitant of Bonavista remembers the mackerel to have been absent from the shores of Newfoundland for a period of 30 years, and to have returned about the year 1804. They will probably again visit our shores, after the expiration of the period of their migration.

Ascending one of the highest rocks I could see, I sat down to view the little fishing boats getting under weigh, and gliding one after another to the different stages, to deposit the few fish that may have been caught during the day. I observed a beautiful butterfly (*Vanessa Fuscillata*) frisking in the dying radiance of the sun. I thought of the beautiful lines of Rogers:

"Child of the sun! pursue thy rapturous flight,
Mingling with her thou lov'st in fields of light,
And where the flowers of paradise unfold,
Quaff fragrant nectar from their cups of gold;

There shall thy wings, rich as an evening sky,
 Expand and shut with silent ecstasy;
 Yet wert thou once a worm—a thing that crept
 On the bare earth, then wrought a tomb and slept—
 And such is man—soon from his cell of clay
 To burst a seraph in the blaze of day."

The young or larva of this butterfly feeds on the nettle (*Urtica*), which is frequently seen swarming with black grubs.

Mushrooms (*Agaricus Campestris*) are sought after at this season. This plant grows very rapidly, and when fried or stewed, has very much the flavour of animal flesh. It is, however, not very wholesome; an excellent catsup is made from the mushroom, and in Russia a species of this plant is steeped in fermented liquor, and frequently when eaten produces intoxication. "Before dismissing the mushroom tribe, it may be as well to remark, that there are many varieties, most of which are exceedingly pernicious, and some absolutely poisonous. The only sort that may be safely eaten, is distinguished by the redness of its gills, the underneath fringe, so called from its resemblance to the gills of a fish. When fresh and young, these gills are of a bright fleshy red; the colour soon becomes darker, and when the plant has been some hours exposed, it becomes dark brown, almost black. In the dangerous sorts, the gills are white, yellowish, or violet colour; all these are absolutely pernicious, and even the best sort is so to some constitutions; and when taken from low marshy grounds is injurious to all. Hence they have been called by an eminent physician 'luxurious poison.'"

About the 23rd of September the autumnal equinox takes place, when day and night are equal all over the globe. This, like the vernal equinox, is generally a stormy season. About a week ago, we were visited with a heavy gale of wind (Sept. 26th, 1842) at Bird-Island Cove. All the fishing stages were swept away, and several fishing boats wrecked. At Bonavista several fishing boats were lost, a number wrecked, and nearly all the stages carried away. The amount of damages sustained has been heavier than has been known for the last twenty years.

The fisherman is now about to enjoy a temporary cessation from the toil and hardship attendant on the fishing voyage, and to be once more in the midst of his family for a longer period than he was wont to be. His heart gladdens and his countenance brightens with a glow of pleasure, when he surveys his hard earnings, his winter stock of provisions safely deposited in his little store-room.

"Loved Autumn! these are thine, and should the storm,
With ruthless rage, thy soothing scenes deform,
Should sullen Winter's rushing streams destroy
Thy heart-felt pleasures, and thy pensive joy,
The fond remembrance of the past shall rise,
Bright as the meteor streams across the skies,
And thy lov'd scenes, on memory deep imprest,
Chase the dark form of sorrow from the breast."

The birds at this season begin to migrate. The sand martin (*Hirundo Riparia*) has already disappeared. The migration of birds has engaged the attention of observant man in all ages of the world. In ancient times the arrival and

departure of birds directed the operations of the field. The migration of birds is generally supposed to take place in the night, and their flight is estimated at the rate of from 50 to 150 miles per hour; so that a night and a day would take any of our birds of passage to the Southern States of America. Swallows have been seen on the shores of Africa after their migrations from Europe. "It is remarked, that all migratory birds, when detained in captivity, manifest great agitation when the period of their migration arrives, inasmuch that some of them occasionally kill themselves, through their efforts to escape. This agitation is always greatest at night, proving, together with observation, that birds generally commence their flight at that time. The cause of this pervading inquietude cannot be attributed either to the want of food or the increase of cold, it being experienced by individuals removed from the influence of either, and therefore must reside in some as yet mysterious warning, no doubt produced by natural causes, which the Creator of the universe has found necessary for the preservation of his creatures."

What a wonderful world in which we dwell! When we think of all the various kinds of beings who inhabit it, and the changes which are constantly taking place, it leads us to contemplate with awe and reverence that great Being who created all things. Astronomers inform us, that our world is at the distance of 95 millions of miles from the sun, moving towards the east at the rapid motion of 70,000 miles an hour, or

more than one thousand miles a minute. It is computed, that the circumference of the earth is about 25,000 miles, its diameter 7,957 miles, and its superficial contents about 200,000,000 of square miles. It is calculated that at least two-thirds of the surface of the earth is covered by water. The form or figure of the earth is globular, or an oblate spheroid. The shape of the orange and the turnip are frequently referred to by astronomers to illustrate the figure of the earth. Dr. Dick says, "The annual revolution of the earth is accomplished in 365 days, 5 hours, 48 minutes, and 51 seconds. In the course of this revolution, the inhabitants of every clime experience, though at different times, a variety of seasons. Spring, summer, autumn, and winter, follow each other in constant succession, diversifying the scenery of nature, and distinguishing the different periods of the year. In those countries which lie in the southern hemisphere of the globe, November, December, and January are the summer months, while in the northern hemisphere, where we reside, these are our months of winter, when the weather is coldest and the days shortest. In the northern and southern hemispheres the seasons are opposite to each other, so that when it is spring in the one it is autumn in the other, when it is winter in southern latitudes it is summer with us. During six months, from March 21st to September 23d, the sun shines without intermission on the north pole; so that there is no night there during all that interval, while the south pole is all this time enveloped in darkness.

From September to March the south pole enjoys the solar light, while the north, in its turn, is deprived of the sun and left in darkness. The sun is at different distances from the earth at different periods of the year, owing to the earth's moving in an elliptical orbit, but it is not upon this circumstance that the seasons depend. For on the 1st of January we are more than three millions of miles nearer the sun, than on the 1st of July, when the heat of our summer is generally greatest. The true cause of the variation of the seasons consists in the inclination of the axis of the earth to the plane of its orbit, or in other words, to the ecliptic. If its axis were *perpendicular* to the ecliptic, the equator and the orbit would coincide, and as the sun is always in the plane of the ecliptic, it would in this case be always over the equator; the two poles would be always enlightened, and there would be no diversity of days and nights, and but one season throughout the year."

The bat (*Vespertilio*) is occasionally seen skimming the air on leathern wings. Professor Rennie says, "The extraordinary delicacy of touch possessed by bats, made Spallanzani conceive that they had a sense to which other animals have nothing similar, and to ascertain this he performed upon these creatures many cruel experiments. He found that bats, when blindfolded, and even when their eyes are destroyed altogether, and leather glued over the sockets, can fly nearly as well as before, and can avoid in their flight the smallest objects hung up to interrupt them. They

can even dart through a hole in a curtain or net large enough only to admit their passage, and that without previous examination. The correctness of these facts was proved by Dr. Jurin of Geneva, and Sir A. Carlisle, who repeated his experiments. Baron Cuvier found that the wing of the bat, which is of great extent compared with the body, is one continued tissue of exquisitely sensible nerves, and that the feeling of touch is here most acute. If this be correct, the blinded bat is guided wholly by the impression of the air on its wings, in finding out its nest or the hole in a curtain. This is well illustrated by the feelings which we ourselves have, when we approach near to any object, such as a wall, in the dark: a feeling which, from exercise, is much more acute in the blind. The delicacy of touch in the bat is a striking provision of Divine wisdom, as the creature, always flying in the twilight and in the night, could not well depend on its eyes in avoiding objects during its rapid flight in pursuit of the insects on which it preys."

On my way home I saw a lobster (*Articus Marinus*), which was safely lodged in a hole between the rocks on the margin of the sea. It was dead, and appeared to have been there a considerable time. It was probably thrown up where I saw it during a heavy sea. Lobsters are said to acquire a new shell annually.

Passing over the brook flowing down the north side of Bird-Island Cove, I observed several fine eels (*Anguilla Muraena*) darting under the rocks. This fish is very tenacious of life; it is said that

after the heart has been removed from the eel, it has retained its motion and irritability for 100 hours.

The sun was just sinking behind the western hills when I reached home. At no season of the year is sunset more beautiful than in autumn. The sky appears as if touched with the wand of a magician, and as if by the power of enchantment the most gorgeous tints burst into existence, bedecking the clouds with the most lovely scenery. Generally at sea the most splendid sunsets are seen. I have often indulged in the delights of the scene when viewing the glorious "camp of day" gradually sinking beneath the waves in the Atlantic Ocean.

"The beautiful sunshine is fading,
The light in the west slowly dies;
Whilst twilight's soft pencil is shading
The mountains and pastures and skies.

"O, who can behold the day's glory,
Thus deeply envelop'd in gloom;
Nor liken the scene to man's story,
Nor think on the shades of the tomb?"

THE
STEAMER JOHN M^c ADAM

ENTERING TRINITY HARBOUR.

THE John M^c Adam is the second steamer which has appeared in Newfoundland. She arrived at St. John's on the 4th of August, 1842. This vessel had been previously employed running between Cork and Liverpool, and was sent to this country in order to be sold. The following account is from the "Public Ledger:" "The John M^c Adam left St. John's on Wednesday morning, about half-past nine o'clock, with a company of about 50-ladies and gentlemen on board; and on proceeding through the Narrows passed H. M. S. Spartan, also outward-bound, and gave them hearty cheers, which were just as heartily responded to. Having rounded the Southern Head, the John M^c Adam kept the shore on board, until she had turned the low sharp point known as Cape St. Francis, and had proceeded some considerable distance down the south shore of Conception Bay towards Portugal Cove, when she directed her course across to



THE JOHN MCADAM OF 100 HORSE POWER, ENTERING THE HARBOUR
OF TRINITY, N.F.L. ON THE 18TH OF AUGUST. 1872

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the western end of Bell Isle, and thence to Brigus, into which harbour she ran, taking the sweep of the bight, and approaching the town as nearly as was prudent. Having stopped her course for the space of ten minutes for the purpose of gratifying the curiosity of the inhabitants, as well as of affording the passengers a sight of the town, she proceeded to Port-de-Grave, steaming in on the west side of the Bay, in which that and several minor settlements are, and passing out on the east, ran down the north shore, and into the port of Carbonear, which she swept as in the former cases, arresting her progress for a few minutes with the same object in view. On leaving Carbonear the steamer retraced a part of her course, and passing between Carbonear rock and the main, entered and ran up the long indraught, at the head of which stands Harbour Grace, the capital of the northern district, which place she reached about eight o'clock, and came to anchor. Here several of the passengers went on shore, and received the hearty welcomes and the kind hospitalities of their friends; and at one o'clock, having rejoined the ship, weighed anchor, and proceeding down the whole of the north shore of the Bay, passing between Baccalieu and the main, entered the capacious Bay of Trinity, and crossing the whole breadth of it, entered the harbour of Trinity, than which we believe it scarcely possible to find one more picturesque and beautiful. Here the John M^c Adam again cast anchor, and the visitors proceeding on shore, occupied much of the brief space of time allotted

them by the general arrangements, in admiring the beauty of the scenery, which every where presented itself, the remainder being employed in receiving the pressing attention and hospitalities of their friends. Shortly before one o'clock the steamer again weighed anchor, and traversing the mouths of Trinity and Conception Bays, and running along the coast from St. Francis, hither entered St. John's, and came to anchor about half-past nine o'clock; thus completing the most perfectly novel, whilst it has been one of the most interesting and pleasurable, excursions ever experienced in Newfoundland."

The first steamer which ever appeared in a port of Newfoundland was H. M. steamer Spitfire, on the 5th of November, 1840, bringing from Halifax a detachment of men for the Royal Veteran Companies. After remaining a few days she sailed for England. During her stay at St. John's numbers gratified their curiosity by going on board and inspecting the vessel. This steamer was lost on the 6th of October, 1842, on her voyage from Jamaica to Belise, on Half Moon Key Reef.

The first royal mail steamer ever employed in Newfoundland, arrived at St. John's about 8 o'clock on Monday morning, April 22nd, 1844, having run the distance from Halifax (near 700 miles) in 60 hours. She is called the North America, and commanded by Captain R. Meagher.

"It is always interesting to trace great discoveries back to the first hint, accident, or notice, that may have given rise to them; in no

instance, perhaps, more so than those which suggested the modern application of steam to mechanical purposes. While the Marquis of Worcester was a state prisoner in the Tower, some food being prepared on the fire of his apartment, the cover of the vessel being tight, was, by the expansion of the steam, suddenly forced off and driven up the chimney. This led him to a train of thought in reference to the practical application of steam as a first mover. The result of his speculations was obscurely hinted in his celebrated work entitled 'A Century of Inventions,' and published in 1663: but it was still many years before the principle was seized and applied to the improvement of art. Long it lay buried in the mass of hints and observations which the Marquis had given to the world, but which were for a considerable period overlooked or disregarded: so slow, in some cases, is the progress of knowledge. At length, by the successive labours of Captain Savery, Newcomen, and Cawley, Beighton, Watt, and others, society has witnessed that noblest example of mechanical ingenuity, the steam-engine. Nothing is more astonishing in the productions of modern art than the operations of this admirable machine. To think that an aqueous vapour, which was formerly deemed useless and suffered to vanish into air, is converted by skilful management and adaptation into a first mover, of vast and indefinite power, will give us a high idea of human ingenuity, and of the wisdom and goodness of the Almighty, in endowing his creatures with faculties so 'ex-

press and admirable.' The Marquis of Worcester, besides hinting at the principle upon which steam-engines are constructed, mentioned somewhat obscurely a contrivance of his own, by which he could raise a continual stream, like a fountain, forty feet high, by means of two cocks alternately letting in steam and water. His book was seen by Captain Thomas Savery, who, more than thirty years after its publication, succeeded in applying the force of steam to raise water to a small height, and in small quantities; and that he might have all the honour of the invention to himself, bought up and destroyed all the copies he could procure of the Marquis's book. While Savery was thus employed, Dr. Papin was contriving one on the same principles, though inferior, and M. Amontons, of Paris, was engaged in the same pursuit. Each claimed the originality of the invention, but it is supposed by some that they all took the hint from the 'Century of Inventions.' It has been supposed, that the principle of the steam-engine was known much earlier than we have stated. Some have ascribed its discovery to Hero of Alexandria, who flourished more than two thousand years ago; and others to Brancas, an Italian, in 1629. But we have every reason to believe that whatever casual notice it obtained, no effectual use was made of it, on a large scale, till after the publication alluded to above, and in the manner here stated. Notwithstanding the imperfect state of Captain Savery's machine, it remained without improvement for several years, until, in 1705, Mr. New-

comen, an ironmonger, and Mr. John Cawley, a glazier, both of Dartmouth, contrived another way to raise water by steam, bringing the engine to work with a beam and piston. This great improvement was rendered more perfect by Mr. Henry Beighton, a man of eminent science. In all these engines the steam was applied only to the under side of the piston: the returning stroke was produced by the pressure of the atmosphere upon the surface of the piston, and on this account these machines were afterwards termed atmospheric engines, to distinguish them from those of which we are about to speak. The celebrated James Watt, examining a small model of the atmospheric engine, was struck with two grand defects in its construction, which he succeeded in removing, by applying the steam to the upper as well as to the under side of the piston, and by cooling the steam to produce a vacuum, not in the cylinder itself, but in a separate vessel, called the condensor. The attention which this wondrous engine now excited, occasioned many other scientific men to apply their talents in the same way, and various modifications have been made in the engine itself, and its application extended to numerous other purposes. For many years the only service in which the steam-engine was employed, was that of pumping water out of deep mines; but when the improvements of Watt and others brought it into general notice, it was soon found that a power so great and so manageable, might easily be adopted as a first mover in almost all the processes of art. It has accordingly been

thus employed in almost every species of machinery.

"The application of steam, as a mechanical power, for impelling vessels and carriages, is one of the most brilliant and useful achievements of art which distinguish the present age, and is rapidly producing an important and interesting change, both on inland and foreign intercourse. The fact that a vessel can be impelled by steam, against wind and tide, at the rate of twelve miles an hour, and a carriage on a railway with a velocity of thirty and upwards, is sufficient to account for such a change. From the 'report of a committee of parliament, published in 1822, it appears, that the first application of steam to the impelling of vessels was made by an Englishman of the name of Hull, who, in 1736, obtained a patent for the invention of a steam-boat, to be moved with a crank and paddles. But it was only in 1807 that the invention was fairly brought into practical use by Mr. Fulton, who had the advice and assistance of Mr. Bell, a Scottish engineer. In Britain, the first successful application of steam to vessels was made by Mr. Bell, who built the Comet, of 25 tons and 4 horse power, to ply on the Clyde. In 1840 there were, throughout Great Britain and its colonies, no less than 630 steam-vessels, possessing an aggregate burden of 71,000 tons. From Liverpool steam-vessels now regularly sail to the West Indies and America. These vessels are of enormous size. The Great Western, the first steamer which sailed to America, is 1340 tons burden. The Victoria is a vessel of 500

horse power, and 27 feet longer than our largest man-of-war. The British Queen measures in entire length 275 feet. Her two engines are of 250 horse power each, and she is calculated to carry 1862 tons. Her outward voyage of eighteen days requires a consumption of 540 tons of coal, and her homeward voyage of twelve days, 360 tons. But larger vessels than even these are now in preparation. A regular communication is also now established by steam between Britain and India, by the Mediterranean, Egypt, and the Red Sea."

PROTESTANT CATHEDRAL, ST. JOHN'S.

THE protestant cathedral of St. John's, Newfoundland, is now being erected. It is to be 120 feet long, 56 feet broad, and the tower and spire 130 feet high, to be built of cut stone imported from Ireland, and when finished will be the finest protestant place of worship in Newfoundland. The following account of the laying of the foundation stone is from the "Royal Gazette," of August 22nd, 1843:

"The interesting and imposing ceremony of laying the first stone of the cathedral church of this diocese took place yesterday. The procession formed, according to the programme published last week, at 10 o'clock, by the Theological Institution, whence it moved to the front of government house, where it was joined by His Excellency the Governor, attended by his aide-de-camp, private secretary, and staff. It was a source of universal regret that the Lord Bishop of the diocese was unable, from continued indisposition,

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PROTESTANT CATHEDRAL ST. JOHN'S NFL

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which had been aggravated by his Lordship's journey to Lance Cove, in Belle Isle, on Sunday last, for the purpose of holding a confirmation and consecrating the church recently erected there, to take his place in it. The cavalcade proceeded from Government-house by Cochrane and Duckworth streets to the parish church, where the morning service was read by the Rev. T. F. H. Bridge, the rector; and afterwards an address was delivered to a crowded and most attentive congregation, by the Right Rev. the Bishop. We sincerely regret (and in this feeling all who had the privilege of listening to it will participate) that, as we understand, his Lordship had been too unwell to commit it to writing, we cannot present it to our readers. The eloquence and beauty of his Lordship's language excited universal admiration, and his touching references to his first coming to these shores, twenty-five years ago, as a missionary, his subsequent return as the first bishop of the island, and his approaching separation from his beloved flock, must have gone home to every heart, and did not fail to draw tears from many an eye. At the close of the bishop's address, the Rev. C. Blackman, one of his Lordship's chaplains, read the offertory, during which a collection was made by the clergy in deacon's orders and the churchwardens of St. John's, which, we are glad to announce, amounted to about £90, including the handsome donation of £28 10s. from Major Law, the officers and some of the non-commissioned officers and privates of the Royal Newfoundland Companies. The procession then

moved from the church to the cathedral ground, when a portion of the 132nd Psalm was sung in a very beautiful and solemn manner by the choirs of St. John's and St. Thomas's. His Excellency Sir John Harvey, the governor, at this stage of the proceedings, delivered the following admirable and appropriate address :

“ My Lord, Rev. Gentlemen, Ladies and Gentlemen,

“ Upon no occasion since I have had the high honour of representing our gracious sovereign, have I ever met any considerable portion of Her Majesty's subjects under circumstances of a more interesting nature than those which have now called us together. We are assembled for the purpose of taking the first step in the erection of a Christian temple of a more than ordinarily sacred character, one which is to introduce into and to perpetuate in the Church congregation of this colony the impressive forms of our Cathedral service ; and whether the sacred edifice about to be reared, be regarded as the visible memorial of the completion of a great work begun under the auspices of the respected and highly gifted prelate, from whom we are about to be separated, and as a lasting monument of the zeal by which his superintending labours have been distinguished, and of the great success by which they have been blessed ; or as an indication not equivocal of the firm establishment, through his lordship's exertions, of a branch of our venerated national church in this island ; or, finally, as an edifice well calculated to lend, with those of other congregations, its appropriate adornment to a great Christian city ; the sacred and beautiful building about to be reared must, to the Episcopal congregation of Newfoundland, long continue to be regarded with deep interest and affectionate veneration.

"For myself, while I cannot adequately express the gratification which I feel in having my name indented in any respect with the foundation of this edifice and the proceedings of this day; neither am I able to give adequate expression to the feelings of regret which I am sure are shared by all who hear me, in the contemplation of the approaching departure from among us of one who has established such strong claims upon the gratitude and affection of the Episcopal church of Newfoundland; and in availing myself of this public occasion to assure his lordship, that he will carry with him to his new and more extended charge, the fervent prayers and warmest good wishes of his late flock, for whose spiritual welfare his anxious care has been so unceasingly manifested, during the whole period of his residence in this island. I feel that I am giving expression to the unanimous sentiments not only of all of that congregation now present, but of all its members, wherever dispersed throughout this diocese."

This concluded, the Lord Bishop offered up the solemn and suitable form of prayer which we subjoin, and after the inscription had been read by the rector, proceeded to lay the foundation-stone, with the usual formalities, in the name of the holy and undivided Trinity. His Lordship then said the collect for St. Simon and St. Jude's Day, and pronounced the Benediction; immediately at the close of which the band of the R. N. C. played the national anthem, "God save the Queen." The numerous assemblage then dispersed, and His Excellency, with Lady Harvey, the Bishop, and Mrs. Spencer, the clergy, &c. repaired to the rectory, and partook of some refreshment.

The following is a transcript of the inscription on the plate inserted in the foundation-stone:

"D. O. M.
Hujus Aedis,
Sancto Johanni Apostolo
Dedicatae,
Impensis Anglicis, Simul Coloniciis
Exstructae,
Auspicante Johanne Harvey Equite
Provinciae Rebus Bene Praeposito,
Cleri Autem, Civium
Non Sine Precibus
Aubrelus,
Primus Dioeceseos Terrae Novae
Episcopus,
Primum Lapidem Posuit
XXI. Aug.
Anno Salutis MDCCCXLIII."

Beneath the plate were deposited the seal of the Lord Bishop, a glass bottle, containing coins of the present reign, a parchment with copy of inscription, and numbers of the "Royal Gazette" and "Times" newspapers, in which were published a programme of the proceedings.

The following is the form of prayer delivered by the Lord Bishop on laying the foundation stone:—

"O Lord God Almighty, who alone dost put into our hearts good desires, and whose grace alone enables us to bring the same to good effect; Thou, only Thou hast prompted us to the undertaking in which we are now engaged, and on Thy succour do we faithfully rely for the successful issue of our labours.

"We have been taught, no less by the history of the world than by the declaration of thy holy Psalmist, that 'unless the Lord build the house, their labour is but vain that build it; unless the Lord keep the city, the

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watchman waketh but in vain.' We bless Thee, O Lord, for that Thou hast granted to us manifold assurances of Thy presence in this work which Thy Holy Spirit has inspired. We build, therefore, with Thee, and for Thee, and to Thy name alone be ascribed the honour and glory of these labours, which, when steadfastly conducted, are never in vain in the Lord. From the fountain of all goodness Thou hast sent Thy Holy Ghost to pour into the hearts of many of Thy servants that most excellent gift of charity, which has produced the means to build, and the bonds of unity to cement the edifice which we rear and consecrate to the worship of Thy great name. Long may Thy Fatherly hand be over us, and over those who unite with us in this good enterprise. Bless our foundations, and they shall be blessed. Give skill to our architects and strength to our workmen, that they shall be strong to labour, and that there shall be no decay; lengthen our cords and extend our bulwarks, as it shall seem good to Thy wisdom, that our adversaries may be discomfited, while all shall confess that the Lord of hosts is with us, and that none can effectually oppose the church whose foundations are on the everlasting hills, and of which Thou art the Helper and Defender.

"While we pray, O Lord, as Thou hast taught us, for all sorts and conditions of men, that Thou mayest visit them with Thy great salvation, and bring home all wanderers to Thy flock, we beg an especial blessing on the whole church of Christ, and that pure and Apostolical branch of it to which we belong. We pray for all persons in authority, for the Queen's Most Excellent Majesty, our Sovereign Lady Victoria, whom Thou hast set over us, and whom we are bound to acknowledge in these her dominions, over all persons and in all causes, as well ecclesiastical as temporal, supreme. We pray

for His Excellency, the Governor, for the High Court of Judicature, for the Queen's Honourable Council, and the whole Magistracy and people of this land. And we implore Thee to send Thy grace on all Bishops and Curates, and chiefly on those who shall be called to any holy functions in this place, that they may be so governed and guided by Thy good Spirit, that they may hold and maintain the pure faith of Christ in the unity of the spirit and the bond o. peace.

"And, finally, commending ourselves and all our doings into Thy hands, we desire to offer up our unfeigned thanksgivings for all thy mercies vouchsafed to us. We thank thee for conducting us thus far in the advancement of our designs, and for the earnest of their final accomplishment. In humility and singleness of purpose we attribute all to thee, and crave thy blessing only so far as thou seest that our imperfect work may contribute to the hallowing of thy name, and the advancement of thy heavenly kingdom, through the mediation and merits of thy blessed Son, our Lord and Saviour Jesus Christ.—Our Father, &c."

The first episcopal missionary appointed in Newfoundland, was in 1705, who had for his parish the whole island. In 1827 the first protestant bishop (the present Lord Bishop of Nova Scotia) visited Newfoundland. In 1839 the Right Rev. Dr. Aubrey George Spencer was appointed as the first Lord Bishop of Newfoundland, who, in 1843, removed to the diocese of Jamaica, and who is succeeded in the bishoprick of Newfoundland by the present Lord Bishop, the Right Rev. Dr. Edward Field. The number of clergymen throughout the island is 25, churches 52, schools 30, and the number of episcopalians is estimated at about 30,000.

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ST. ANDREW'S CHURCH, ST. JOHN'S, NFL.

ST. ANDREW'S CHURCH, ST. JOHN'S.

THIS church, just erected in the capital of Newfoundland, is built of wood, and exhibits a noble monument of the zeal and piety of the members of the Church of Scotland. It is considered the handsomest place of worship in the island. It is 60 feet long, 45 feet broad, and the tower and spire 110 feet high. The gallery occupies two sides and one end of the building, which is supported by fluted iron pillars. The whole of the interior is finished in a very chaste and becoming manner. The first stone of this elegant building was laid on Monday, May the 8th, 1843, the following account of which is taken from the "Public Ledger :"

"It is already well known to many of our readers, that the sons of Scotia who are settled in this place, have for some time past been actively engaged in preparation for getting up a place of worship, in connexion with the established church of their native land, and that they have secured the ministerial services of the Rev. Donald A. Fraser, who, early in the past winter, removed from Nova Scotia, where he has

exercised the functions of his calling for a quarter of a century, and who, since the period of his removal to St. John's, has taken spiritual charge of his countrymen here. His Excellency, Sir John Harvey, having granted them a beautiful and commanding site, the necessary preparations for the proposed building have since the opening of the season been rapidly advancing, and on Monday last our townsmen had an opportunity of witnessing the simple but solemn and imposing ceremony of laying the foundation stone of this interesting erection. Kenneth M'c Lea, Esq. an influential merchant of the place, and most deeply interested in the success of this laudable undertaking, officiated on the occasion, in his capacity of president of the Scottish Society. The laying of the stone was preceded and followed by a brief and appropriate prayer, offered by the Rev. Mr. Fraser, and afterwards the highly respectable audience, assembled to witness the ceremony, were addressed by Mr. M'c Lea and Mr. Fraser.

"We cordially congratulate our Scottish friends on the success with which their liberality and zeal have been followed; we consider the attainment of their object, which they have so long and so earnestly desired, calculated to exercise a salutary influence on their comfort and well-being, and it is our sincere and fervent wish, that pastor and flock may be a blessing to each other, and that both may enjoy much of the Divine presence in the sanctuary they are now raising to His service. We know of no event more interest-

ing to Scotchmen in St. John's, than the erection of a place of worship in connexion with the hallowed church of their fathers.

"We should have mentioned above, that Mr. M'c Lea placed in the stone a leaden box, containing several coins of the present and some preceding reigns, together with a sealed bottle, containing some Newfoundland and Scottish newspapers, and the names of the building committee, Peter M'c Bride, Walter Grieve, John Boyd, Dugald M'c Keller, James Douglas, and John M'c William, Esqrs. of Mr. M'c Lea, president of the Scottish Society, of the Rev. Donald A. Fraser, the first pastor of the church, and of Mr. Norris, superintending architect, all engrossed upon parchment."

We subjoin an outline of the addresses delivered on the occasion.

Mr. M'c Lea :

"Dear countrymen,—As you have been pleased to confer on me, the high honour of laying the foundation-stone of the first place of public worship in connexion with the Established Church of Scotland, which has been founded in this colony, it may be expected from me to address a few words to you on this very important and momentous occasion. However, in the presence of so many, my seniors in years, and my superiors in ability, it might be presumptuous in me to say much. I will, therefore, only allow myself, briefly, but sincerely, to congratulate you all on this auspicious commencement of our labours, and to express the hope, that the time is very near at hand, when we shall be able to worship the God of our fathers, in a temple dedicated to His

service, according to the forms of our much-venerated church.

"I cannot allow this occasion to pass without cordially thanking the Rev. Mr. Snowball and his congregation, for the very handsome Christian-like manner in which they have treated our pastor, the Rev. Donald Fraser, by allowing him the use of the Wesleyan Church.

"Trusting that this undertaking may be a bond of love and union, I wish you all happiness here and hereafter."

The Rev. Mr. Fraser :

"Countrymen and friends,—The occasion which assembles us here this day is one which is powerfully calculated to awaken emotions of no ordinary nature. God in his providence has graciously honoured us as instruments of laying the foundation-stone of a fabric to be dedicated to his own service, and to be, whilst it endures, in connexion with the church by law established in Scotland. Around this simple, but comprehensive announcement, how many tender reminiscences of the past—how many hopeful anticipations for the future—spontaneously cluster and gather force! You, my dear fellow-worshippers, cannot, I am convinced, contemplate the cheering prospect with which a benign God is mercifully crowning your laudable efforts, without experiencing a grateful and quickened remembrance of the many claims which our parent church has on your affections and veneration; a church, let me observe, while she extends the olive branch of fraternization to other sections of the Christian vineyard, does not shrink from avowing her own high claims to a Divine origin; and which, while she can point to the pages of inspiration as the charts of her birthright, can also with humble gratitude look to the many gracious evidences of the Divine

presence within her walls, in further vindication of her claims.

"At this solemn moment many of you will doubtless remember, with admiration and thankfulness, the salutary and efficient system pervading all her arrangements, by which maternal solicitude for your temporal and spiritual welfare has been made available from your infancy upwards, through the whole course of your youthful education, until and after you have gone forth into the bustling paths of active life. You will remember that it has been her aim and her purpose to consecrate the home of all her members to the service of God, and so to direct her national education as to render it subservient, not merely to the attainment of objects of secular ambition, but more especially to the nobler aim of training heirs for the kingdom of heaven. You will surely remember that though she be herself now passing through trying fires of difficulty and opposition, she still continues to put forth all a mother's love and energy, in watchful care over her expatriated children.

"With these recollections I can well suppose that there will mingle the remembrance of those sad and dreary years during which you have been painfully debarred in this colony, from participating in the simple but sublime worship of her public ordinances. Thankfully recognizing and acknowledging the liberality and the benefit you have experienced at the hands of other Christian denominations, there is nothing disparaging to their claims on our gratitude, in the avowal that as Scotchmen and as Presbyterians, you must have sighed after the high privilege of entering into our national sanctuary, of again joining in those forms of worship, and listening to those peculiar doctrines which prepossession and conviction have alike made so dear to your hearts. This privilege, however, is at length in some

measure realized to you; and in the occasion which now assembles us, you have a gratifying pledge of its being soon still more amply realized.

"You have witnessed the ceremony of laying the foundation stone of a building consecrated to the service of God, in close and acknowledged connexion with your parent church, and in which you may reasonably hope, that by the blessing of God your children, or those who may succeed you, shall continue to be instructed in the precious truths for which your fathers bled and died, and for which your brothers in your native land are now nobly contending. It must be to you a solemn and delightful event, to be thus honoured in founding a place of worship, the first in this ancient colony of the British empire that has ever been built in connexion with the Church of Scotland. This event seems to me the most important that has ever been transacted by my countrymen, during the whole course of their colonial history. It is important to yourselves individually, inasmuch as we may hope that it will serve powerfully, by its necessary consequences, to awaken within you those holy and salutary considerations which tend to withdraw men's affections and desires from transient and from perishing things, and to elevate them to objects of a purer, a more permanent, and a more satisfying nature. It is important to others who may follow you to this, the land of your adoption, inasmuch as we may hope that they also will continue to find, in connexion with this building, something of that fidelity of scriptural teaching, and that efficiency of pastoral care, which has rendered Scotland and her enterprising sons favourably known among the nations of the earth.

"But all privileges have their corresponding duties. The advantageous circumstances under which we meet this day bring into prominence the obligations under which

we stand to give evidence, by the whole tenor of our spirit and conduct, that our zeal hath not been for a name, however glorious, nor for a form, however excellent, but for a Church, which maketh it her earnest study to impress deeply upon the minds of her members, in every quarter of the globe, the spiritual injunction, 'Fear God; honour the king.' They teach us, by a most gratifying result, how sinful is despondency, when the voice of duty calls us to action; and how rapidly frowning difficulties and disheartening impediments are made to yield before energy and perseverance put forth in a legitimate cause. They remind us of our common country and our common faith, and by the tenderest as well as the most powerful associations, they warn us to draw the bands of brotherly love and forbearance closer than we have ever done, and they call upon us emphatically to record our thankfulness to those kind friends who have aided us in our endeavours. We indeed owe a deep debt of gratitude to the generous brethren in Scotland, whose princely munificence we have experienced—to the ladies among ourselves, who have laboured unweariedly and successfully in our behalf—and to those liberal members of other denominations, who, in various ways, have cheered and helped us onwards to the attainment of our object. It would be to me a delightful duty to particularize some of those whose kindness has been uninterrupted and untrammelled, were I not restrained by feelings of delicacy towards themselves. But it is at once our duty and our privilege, above all, to acknowledge the wonderful and condescending goodness of a gracious God, who has led us by a way that we knew not of, making difficulties themselves to operate in our favour, and causing 'all things to work together for our good.' Let it be our earnest endeavour and our increasing prayer, to realize to ourselves the solemn

truth, that 'unto whomsoever much is given, of him also shall much be required.'"

It affords us much pleasure to learn that the ladies of the St. Andrew's Church committee have presented their pastor, the Rev. Donald A. Fraser, A. M., with a rich and elegant Geneva gown, imported for him from Scotland; and that John M'c Farlan, Esq., of the Commissariat department, son to the Very Rev. Principal M'c Farlan, of Glasgow, and one of the elders of St. Andrew's Church, has at the same time presented a very handsome pulpit Bible and Psalm-book.

This singularly neat, well-constructed and substantial edifice, the first ever erected in this colony for the purpose of the worship of God, according to the doctrine and discipline of the Kirk of Scotland, was opened by the Rev. Donald A. Fraser, A. M., on Sunday morning, December 3rd, 1843. The rev. gentleman took his text from the first clause Gal. iv. 18, and preached to a numerous and attentive audience, among whom was his Excellency, Sir John Harvey, and suit, occupying a pew eligibly situated in the centre of the gallery, and suitably lined and decorated for the reception of the governor of the colony for the time being. There were also present the Hon. Chief Justice Bourne, Major Law, and the officers of the garrison, and many others belonging to the various Christian denominations, who appeared to feel much interest upon the occasion.

The number of presbyterians throughout the colony are estimated at about 500.

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THE CATHOLIC CATHEDRAL OF ST. JOHN THE BAPTIST, N.F.L.

THE CATHOLIC CATHEDRAL, ST. JOHN'S.

THIS building is now in course of erection, the materials of which are stone, and when finished will be one of the finest buildings in British North America. It is 237 feet long, 80 feet broad, and the towers 138 feet high. The stone for the cathedral has been obtained in Conception Bay, from a small island called Kelly's Island, where it was found to be in great quantity, and nearly ready, from natural stratification and cleavage, for the use of the mason in the rough walling. The cut stone for the doors, windows, pillars, and front, has been brought from the celebrated white granite quarries of Kingstown, formerly Dunleary, near Dublin, and some of it has been worked by an intelligent stone-cutter into capitals and archivolts, with a freedom and depth of cutting which it could scarcely be expected would be obtained in so hard and splintery a material. This edifice will present, when finished, the extraordinary fact of having been raised chiefly by voluntary labour. The stone was brought from

Kelly's Island in vessels free of charge, raised from the shore, landed on the Bishop's wharf, and taken up the steep hill on the summit of which the cathedral stands, and handed to the builders, all by voluntary labour, men, women, and children assisting in the work; and in one working season of summer and autumn, the enormous walls of this church, capable of holding several thousand people, were raised twenty feet, and the windows arched and secured by several courses over them.

The foundation stone of this building was laid on Thursday, May 20th, 1841, the following account of which is taken from the "Vindicator:"

"A cross of immense dimensions having been previously erected on the spot where the principal altar is destined to stand, the bishop on arriving began the imposing ceremonies of the day by blessing the water contained in a silver ewer, borne by one of the assistant clergymen, and intended to be used during the ceremonies, at the conclusion of which sacred rite the beautiful Psalm, 'How beautiful are thy tabernacles, O Lord,' followed by the Litany of the saints, was sung by the choir and the priests alternately; and after reciting the 126th Psalm, 'Unless the Lord,' the first stone of the new cathedral was laid, according to the form prescribed in the ritual by his Lordship. The stone is a mass of granite, about two tons weight, having in the centre a square cavity worked, in which was deposited a copper box, lined with lead, containing a large parchment roll, with the following inscription, signed by the twelve clergymen present:

"Very Rev. Charles Dalton,
 Very Rev. Denis Mackin,
 Rev. Thomas Waldron,
 — James Murphey,
 — Patrick Cleary,
 — Pelagius Nowlan,
 — Patrick Ward,
 — John Forristal,
 — John Cummins,
 — Kieran Walsh,
 — Edward O'Keefe,
 — John Ryan.

"To the great honour and glory of God!' this first stone of the Catholic Cathedral of St. John's, Newfoundland, dedicated to the most high God, under the patronage of the blessed St. John the Baptist, was laid by the Right Rev. Dr. Fleming, in the presence of the priests whose names are hereunto subscribed, and several thousands of other persons, on Thursday, the 20th day of May, in the year of our redemption, 1841, in the 4th year of the reign of her most gracious Majesty Queen Victoria, and in the 11th of the pontificate of his Holiness, Pope Gregory XVI.'"

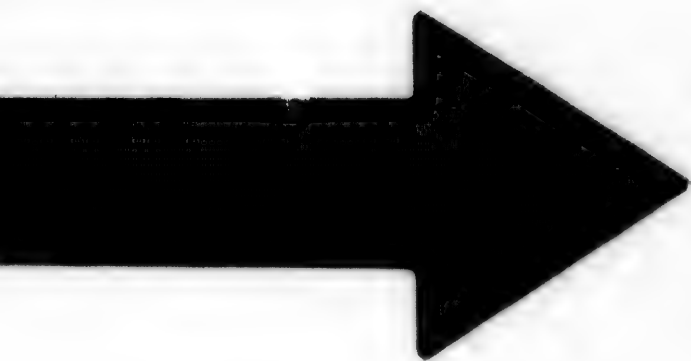
Dr. James O'Donnell came hither as head of the Roman Catholic church in 1784, with the title of 'Prefect and Vicar Apostolic of Newfoundland.' He was subsequently raised to the dignity of bishop. After spending meritoriously twenty-three years of his life in this country, he returned to Ireland, where he passed the remainder of his days. On his retiring from Newfoundland, the British government, in testimony of his patriotic conduct, presented him with a pension of fifty pounds a year. In 1830 the Right Rev. Dr. Scallan died. He had for many years in this island discharged the duties of his responsible office. His kind and condescending deportment rendered him generally beloved, and his loss was deeply and universally lamented. He was succeeded in the

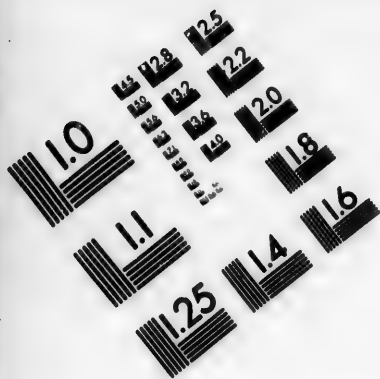
bishoprick by his Lordship the present bishop, the Right Rev. Michael Anthony Fleming, bishop of Caspasia and Vicar Apostolic.

The number of clergymen throughout the island is 28, churches 42, schools 5,* and the number of Catholics is about 45,000.

* Besides the schools belonging to the various denominations, there are other schools throughout the colony, established by the local legislature.







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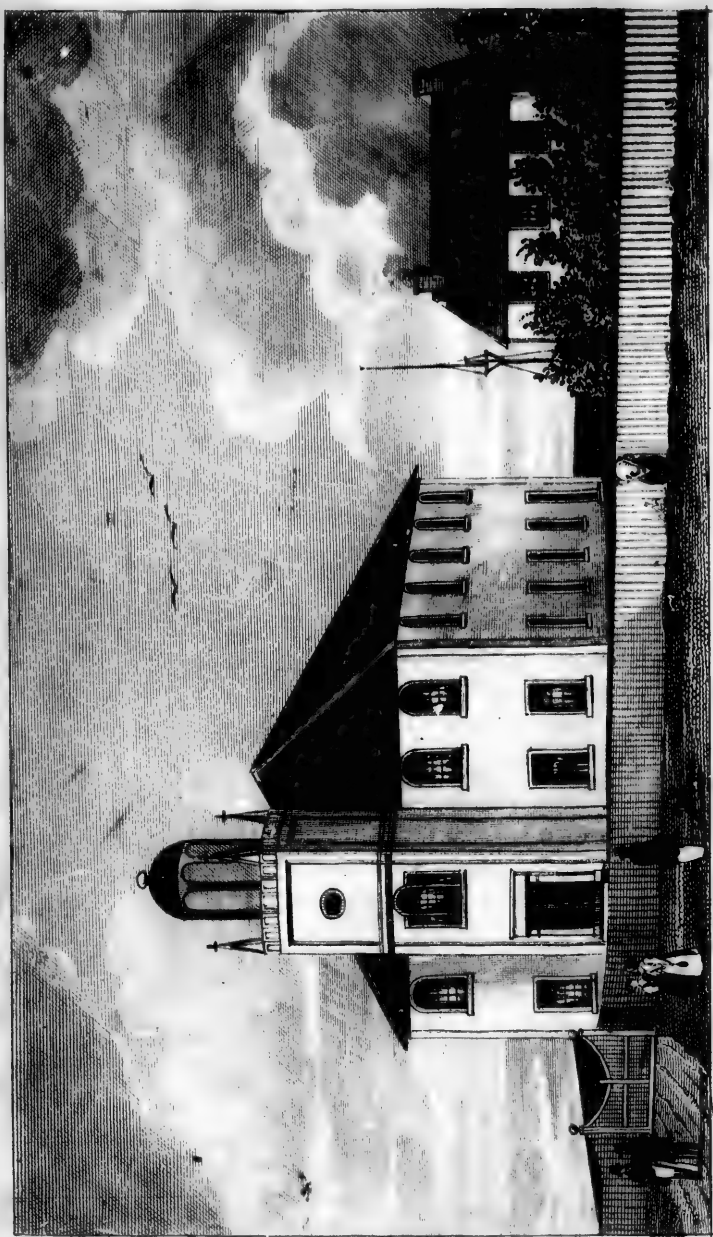
PART OF THE N. W. ARM OF TRINITY. N.F.L. PAGE 365

PART OF THE N. W. ARM OF TRINITY.

TRINITY HARBOUR (so called from some of the earlier navigators entering it on Trinity Sunday) is considered one of the best and largest harbours, not only of Newfoundland, but of the world. It has several arms and coves, where thousands of ships may ride land-locked, where neither wind, tide, or sea can injure them. The annexed engraving is a representation of part of the N. W. arm, which runs in various directions for a distance of three miles. The S. W. arm also flows in different branches to about the same distance, when both arms nearly meet, forming Rider's Hill (which is situated in the centre of the harbour, and at the foot of which stands the town) into a peninsula. The scenery on all sides of both arms is extremely beautiful. The woods in some parts skirt the edge of the water, amongst which are seen the graceful birch, shining like a silvery column amid the dark evergreens and underwood. Towering piles of rocks are

seen tossed into various forms, from whose sides and fissures the fir, birch, and mountain ash spring, waving with the slightest breeze. Here also is heard the roaring of several large brooks, thundering in solitude, and creating an ever varying succession of spray and foam, as they dance along their course from one rocky declivity to another to the sea. When the returns were made, in 1836, the population of Trinity was 1253, dwelling-houses 144, acres under cultivation 90, bushels of potatoes 7553, tons of hay 44, horses 7, horned cattle 82, hogs 69, sheep 21, 1 school, and 239 pupils. There were three places of worship—1 Episcopalian, 1 Methodist, and 1 Roman Catholic. The population of Trinity and the adjacent coves is now probably upwards of 3,000.

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WESLEYAN CHURCH, AND MISSION HOUSE CARBONEAR NFL.

WESLEYAN CHURCH, CARBONEAR,

WITH FRONT VIEW OF THE MISSION HOUSE.

THE Wesleyan Church, of which the annexed engraving is a representation, was built at Carbonear, in the year 1821, on the site of the previous one, which had been destroyed by a fire. In 1830 the tower of the present building was added to it, and in 1842 it was greatly enlarged and beautified. Dedicatory services were held on Sunday, Nov. 20th, 1842. The services were conducted in the morning by the Rev. John Pickavant, chairman of the district, and in the afternoon and evening by the Rev. Ingham Sutcliffe.

Upon each occasion very powerful sermons were delivered to large and deeply attentive congregations, and at the concluding service the collection amounted to upwards of £30. The enlargement and alterations which have been made in this spacious and elegant building have rendered it one of the finest and most commodious

places of worship in the island. It is the Cathedral of Methodism in Newfoundland, being the largest place of worship belonging to the Wesleyans in the island. It is a substantial wooden building, capable of seating upwards of 1500 persons. The gallery surrounds the interior, and is ornamented in front with pannels, &c. The whole interior is beautifully embellished in a suitable manner. This building stands in the centre of a beautiful cemetery, considered to be the handsomest in Newfoundland.

The first Wesleyan missionary who visited Newfoundland was the Rev. Lawrence Coughlan, in the year 1768, respecting which Mr. Miles says, "In the year 1765, Mr. Lawrence Coughlan was a travelling preacher in connexion with Mr. Wesley. He was in the year 1768 ordained by the Bishop of London, at the request of the Society for the Propagation of Christian Knowledge, that he might be qualified for the office of a missionary in the island of Newfoundland. He accordingly went thither, and for three years and upwards he laboured in Harbour-Grace and Carbonear, without any apparent success, and in the midst of great persecution. He was persecuted in the chief court of the island, but escaped the fury of his enemies. In letters to the Society for the Propagation of the Gospel, he was accused of almost every thing that was bad. When his enemies found that those methods were not sufficient to remove him, they employed a physician to poison him, who was soon afterwards converted to God, and discovered this

wicked design. At length the Lord was pleased to visit this miserable people, and poured out His Spirit abundantly. Many were soon turned to the Most High. Mr. Coughlan immediately united the truly sincere in regular classes. On this the persecution grew hotter; till at last he was summoned before the governor; but the governor declared in his favour, and appointed him a Justice of the Peace, on which the persecution ceased, and he laboured for four years in much quietness and with great success. He then returned to England for want of health. On Mr. Coughlan's departure, Mr. Stretton, a local preacher from Limerick, and Mr. Thomay, another local preacher, both in connexion with Mr. Wesley, and at that time merchants on the island, undertook the care of the societies which Mr. Coughlan had formed; but those gentlemen being much engaged in mercantile business, the societies soon fell into decay. Some years after this, Mr. Wesley appointed Mr. John M'c Geary as a missionary to Newfoundland, who went over accordingly. In 1790, Mr. M'c Geary, who had returned to England, was appointed a second time to that island, with two travelling preachers from the United States: they were rendered useful to the people. In the year 1791, a favourable change took place in their behalf. Mr. William Black, who was born at Huddersfield, in Yorkshire, A. D. 1760, visited Nova Scotia. His labours were attended with great success. In the year 1792, he was appointed superintendent of the whole work in British

America, during which period he visited Newfoundland.

In the year 1814 Newfoundland was made a separate district, under the superintendence of the Rev. John M'c Dowell. The number of ministers throughout the island is 14, including the Rev. Richard Williams, chairman of the district. Local preachers, 29; places of worship, 35; other preaching places, 82; catechists, 4; full members in church fellowship, 2333; Sabbath-school teachers, 163; and 1908 scholars; day schools, 7. The number of persons attending the Wesleyan ministry is upwards of 15,000.

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CONGREGATIONAL CHURCH ST. JOHN'S N.F.L.

CONGREGATIONAL CHURCH, ST. JOHN'S.

THE Congregational Church is a wooden building, and although the exterior begins to look old,* yet the interior has a very neat appearance. It has two end galleries, one of which is occupied by the choir, and immediately in front of it stands the pulpit. This building is 70 feet long and 30 feet broad. The following account was written by the late Rev. D. S. Ward, and published in Sir Richard Bonnycastle's work on Newfoundland: "This church was instituted in the year of our Lord 1778, at a time when there was the greatest imaginable destitution of religious means in this island, as appears from its early records. It is identified with the Independent or Congregational churches in England, by whose benevolent exertions it was originally founded; it has always been supported by its own pew-rents, and the voluntary contributions of its friends. The first minister ordained in England to take the pastoral charge was Mr. John Jones, who laboured successfully among them for twenty-one years; and although since his decease it has suffered many vicissitudes, in consequence of its peculiarly isolated situation, it has always maintained a

* It is now undergoing considerable repairs.

steady and respectable position in St. John's. Its present minister left a pastoral charge in Devonshire to take the oversight of this church, in the year 1824, and since that period has continued his labours with encouragement and success. There are three public services on the Lord's day, and two in the week. There is an annual fast-day observed, and also a day of annual thanksgiving. The members of this Christian communion are respectable in character and number, and their place of worship is well attended. Their Sabbath-school, supported by voluntary contributions, is large, and well conducted by respectable superintendents and teachers. It may be but justice to say, that several other places of worship, situated in different parts of the district, originated with them, and mainly erected by their exertions, viz. the old place of worship at Portugal Cove, the place of worship at Petty Harbour, now Episcopal; the church at Quidi Vidi, raised wholly by the exertions of the minister of the Congregational church and constituted the joint property of the Episcopal, Congregational, and Wesleyan bodies in this town."

This is the only Congregational place of worship in Newfoundland, the number of persons attending which is about 300. On the 16th of August, 1843, the death of the Rev. Daniel Spencer Ward took place, after presiding over the Congregational Church with distinguished piety and ability for a period of upwards of nineteen years. The present minister of the Congregational Church is the Rev. Daniel D. Evans.

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MARY MARCH RED INDIAN

OR BOEOTHICK NFL PAGE 373

MARY MARCH,

RED INDIAN, OR BÖEOTHICK, OF NEWFOUNDLAND.

MARY MARCH, (so called from the month in which she was taken). In the year 1819 a party of furriers met two men and a female on the ice, in Red Indian Lake. The woman was secured, but her husband and the other Indian, while endeavouring to rescue her, were most unjustly and barbarously shot. Her husband was said to be a man six feet high, and of noble appearance. The woman was afterwards conducted to St. John's, where she remained a year, and experienced the kindest treatment from the inhabitants. In the following winter she was sent back, under the care of Captain Buchan, with presents for her tribe, but she died on board the vessel. Her body was wrapped in linen, placed in a coffin, and left on the margin of a pond, where it was soon found by her own people and carried away. Mr. Cormack found it some years after, lying beside the remains of her husband. "Mary March, it is said, had hair much like that of an European,

but was of a copper colour, with black eyes. Her natural disposition was docile, and although fifty years old, she was very active, and her whole demeanour agreeable; in this respect, as well as in her appearance, she was very different from the Micmas, or any Indians we are acquainted with." Sir Richard Bonnycastle says, "Nothing was seen or heard of this people again until the winter of 1823, when a party of them was seen on the ice in New Bay, an inlet of the Great Bay of Notre Dame, by some furriers. On the first meeting these amiable whites shot a man and a woman, who were approaching them apparently for food. The man was first killed, and the woman in despair remained a calm victim. Mr. Cormack was told these facts by the very barbarian who shot her. Three other women afterwards gave themselves up, and one was brought to the capital. They were all three in a starving condition, and what became of the other two does not very clearly appear. Shanandithit, the one brought to St. John's, was very kindly treated there, and lived six years, dying in the hospital in 1829, of a pulmonary disease, to which, it appears from her communications, her tribe was subject."

In 1827 a Boeothick society was formed in St. John's, having for its object the civilization of the native savages, and an expedition was undertaken by W. E. Cormack, Esq., president of the society.

"My party," says Mr. Cormack, "consisted of three Indians, whom I procured from among the other different tribes, viz. an intelligent and

able man of the Abenakie tribe, from Canada; an elderly mountaineer from Labrador; and an adventurous young Micmac, a native of this island, together with myself. It was my intention to have commenced our search at White Bay, which is nearer the northern extremity of the island than where we did, and to have travelled southward; but the weather not permitting to carry my party thither by water, after several days' delay I unwillingly changed my line of route.

"On the 31st of October, 1828, last, we entered the country at the mouth of the River Exploits, on the north side, at what is called the Northern Arm. We took a north-westerly direction, to lead us to Hall's Bay, which place we reached through an almost uninterrupted forest, over a hilly country, in eight days. This tract comprehends the country interior from New Bay, Badger Bay, Seal Bay, &c., these being minor bays, included in Green or Notre Dame Bay, at the north-east part of the island, and well known to have been always heretofore the summer residence of the Red Indians.

"On the fourth day after our departure, at the east end of Badger Bay, Great Lake, at a portage known by the name of the Indian Path, we found traces made by the Red Indians, evidently in the spring or summer of the preceding year. Their party had had two canoes; and here was a canoe-rest, on which the daubs of red ochre, and the roots of trees used to fasten or tie it together, appeared fresh. A canoe rest is simply a few beams supported horizontally about five

feet from the ground, by perpendicular posts. A party with two canoes, when descending from the interior to the sea-coast through such a part of the country as this, where there are troublesome portages, leave one canoe resting bottom up, on this kind of frame, to protect it from injury by the weather, until their return. Among other things which lay strewed about here, were a spear-shaft, eight feet in length, recently made, and ochered parts of old canoes, fragments of their skin dresses, &c. For some distance around the trunks of many of the birch, and of the var (*Pinus Balsamifera*) had been rinded, these people using the inner part of the bark of that kind of tree for food. Some of the cuts in the trees with the axe were evidently made the preceding year. Besides these we were elated by other encouraging signs. The traces left by the Red Indians are so peculiar, that we were confident those we saw here were made by them.

"This spot has been a favourite place of settlement with these people. It is situated at the commencement of a portage, which forms a communication by a path between the sea-coast at Badger Bay, about eight miles to the north-east, and a chain of lakes extending westerly and southerly from hence, and discharging themselves by a rivulet into the River Exploits, about thirty miles from its mouth. A path also leads from this place to the lakes near New Bay, to the eastward. Here are the remains of one of their villages, where the vestiges of eight or ten winter mamateeks, or wigwams, each intended to con-

tain from six to eighteen or twenty people, are distinctly seen close together. Besides these, there are the remains of a number of summer wigwams. Every winter wigwam has close by it a small square-mouthed or oblong pit, dug into the earth, about four feet deep, to preserve their stores, &c. in. Some of these pits were lined with birch rind. We discovered also in this village the remains of a vapour-bath. The method used by the Boeothicks to raise the steam, was by pouring water on large stones, made very hot for the purpose, in the open air, by burning a quantity of wood around them; after this process the ashes were removed, and hemispherical framework closely covered with skins, to exclude the external air, was fixed over the stones. The patient then crept in under the skins, taking with him a birch-rind bucket of water, and a small bark-dish to dip it out, which, by pouring on the stones, enabled him to raise the steam at pleasure.*

"At Hall's Bay, we got no useful information from the three (and only) English families settled there. Indeed we could hardly have expected any; for these and such people, have been the unchecked and ruthless destroyers of the tribe, the remnant of which we were in search of. After sleeping one night in a house, we again struck into the country to the westward.

* Since my return I learn from the captive Red Indian woman, Shanandithit, that the vapour-bath is chiefly used by old people, and for rheumatic affections.

"In five days we were on the high lands south of White Bay, and in sight of the high lands east of the Bay of Islands, on the west coast of Newfoundland. The country south and west of us was low and flat, consisting of marshes, extending in a southerly direction more than thirty miles. In this direction lies the famous Red Indians' Lake. It was now near the middle of November, and the winter had commenced pretty severely in the interior. The country was every where covered with snow, and, for some days past, we had walked over the small ponds on the ice. The summits of the hills on which we stood had snow on them, in some places, many feet deep. The deer were migrating from the rugged and dreary mountains in the north, to the low, mossy, barren, and more woody parts in the south; and we inferred, that if any of the Red Indians had been at White Bay during the past summer, they might be at that time stationed about the borders of the low tract of country before us, at the deer-passes, or were employed somewhere else in the interior, killing deer for winter provision. At these passes, which are particular places in the migration lines of path, such as the extreme ends of, and straits in, many of the large lakes—the foot of valleys between high and rugged mountains—the fords in the large rivers, and the like—the Indians kill great numbers of deer with very little trouble, during their migrations. We looked out for two days from the summits of the hills adjacent, trying to discover the smoke from the camps of the Red

Indians, but in vain. These hills command a very extensive view of the country in every direction.

"We now determined to proceed towards the Red Indians' Lake, sanguine that, at that known rendezvous, we could find the objects of our search.

"In about ten days we got a glimpse of this beautifully majestic and splendid sheet of water. The ravages of fire which we saw in the woods for the last two days indicated that man had been near. We looked down on the lake, from the hills at the northern extremity, with feelings of anxiety and admiration. No canoe could be discovered moving on its placid surface in the distance. We were the first Europeans who had seen it in an unfrozen state, for the three former parties who had visited it before were here in the winter, when its waters were frozen and covered over with snow. They had reached it from below, by way of the River Exploits, on the ice.

"We approached the lake with hope and caution; but found to our mortification that the Red Indians had deserted it for some years past. My party had been so excited, so sanguine, and so determined to obtain an interview of some kind with these people, that on discovering from appearances every where around us, that the Red Indians—the terror of the Europeans as well as the other Indian inhabitants of Newfoundland—no longer existed; the spirits of one and all of

us were very deeply affected. The old mountaineer was particularly overcome.

"There were every where indications, that this had long been the central and undisturbed rendezvous of the tribe, when they had enjoyed peace and security. But these primitive people had abandoned it, after having been tormented by parties of Europeans during the last eighteen years. Fatal rencounters had on these occasions unfortunately taken place.

"We spent several melancholy days wandering on the borders of the east end of the lake, surveying the various remains of what we now conjectured to have been an unoffending and cruelly exterminated people. At several places by the margin of the lake are small clusters of winter and summer wigwams in ruins. One difference, among others, between the Boeothick wigwams and those of the other Indians, is, that in most of the former there are small hollows, like nests, dug in the earth around the fireplace, one for each person to sit in. These hollows are generally so close together, and also so close to the fireplace, and to the sides of the wigwams, that I think it probable these people have been accustomed to sleep in a sitting position. There was one wooden building constructed for drying and smoking venison in, still perfect; also a small log-house, in a dilapidated condition, which we took to have been once a storehouse. The wreck of a large handsome birch-bark canoe, about twenty-two feet in length, comparatively new, and certainly very little used, lay thrown up

among the bushes at the beach. We supposed that the violence of a storm had rent it in the way it was found, and that the people who were in it had perished; for the iron nails, of which there was no want, all remained in it. Had there been any survivors, nails being much prized by these people, they never having held intercourse with Europeans, such an article would most likely have been taken out for use again. All the birch trees in the vicinity of the lake had been rinded, and many of them, and of the spruce, fir, or var, had the bark taken off, to use the inner part of it for food, as noticed before.

"Their wooden repositories for the dead are what are in the most perfect state of preservation. These are of different constructions, it would appear according to the character or rank of the persons entombed. In one of them, which resembled a hut ten feet by eight or nine, and four or five feet high in the centre, floored with squared poles, the roof covered with rinds of trees, and in every way well secured against the weather inside, and the intrusion of wild beasts, there were two grown persons laid out at full length on the floor, the bodies wrapped round with deer-skins. One of these bodies appeared to have been placed here not longer ago than five or six years. We thought there were children laid in here also.

"On first opening this building, by removing the posts which formed the ends, our curiosity was raised to the highest pitch; but what added to our surprise was the discovery of a white deal

coffin, containing a skeleton neatly shrouded in white muslin. After a long pause of conjecture how such a thing existed here, the idea of Mary March occurred to one of the party, and the whole mystery was at once explained.*

"In this cemetery were deposited a variety of articles, in some instances the property and utensils, and of the achievements, of the deceased. There were two small wooden images of a man and a woman, no doubt meant to represent husband and wife, and a small doll, which we supposed to represent a child (for Mary March had to leave her only child here, which died two days after she was taken), several small models of their canoes, two small models of boats, an iron axe, a bow and quiver of arrows were placed by the side of Mary March's husband, and two fire-stones (radiated iron pyrites, from which they produce fire, by striking them together) lay at her head; there were also various kinds of culinary utensils, neatly made of birch rind, and ornamented; and many other things, of some of which we did not know the use or meaning.

"Another mode of sepulture which we saw here was, where the body of the deceased had been wrapped in birch rind, and with his property, placed on a sort of scaffold, about four feet and a

* Mary March was the Red Indian female who was captured and carried away by force from this place by an armed party of English people, nine or ten in number, who came up here in the month of March, 1819. The local government authorities at that time did not foresee the result of offering a reward to bring a Red Indian to them.

half from the ground. The scaffold was formed of four posts, about seven feet high, fixed perpendicularly in the ground, to sustain a kind of crib, five feet and a half in length, by four in breadth, with a floor made of small squared beams, laid close together horizontally, and on which the body and property rested. A third mode was, when the body bent together, and wrapped in birch rind, was inclosed in a kind of box, on the ground. The box was made of small squared posts, laid on each other horizontally, and notched at the corners, to make them meet close; it was about four feet by three, and two and a half feet deep, and well lined with birch rind, to exclude the weather from the inside. The body lay on its right side.

"A fourth and most common mode of burying among these people, has been to wrap the body in birch rind, and cover it over with a heap of stones, on the surface of the earth, in some retired spot; sometimes the body, thus wrapped up, is put a foot or two under the surface, and the spot covered with stones; in one place, where the ground was sandy and soft, the bodies appeared to have been buried deeper, and no stones placed over the graves.

"These people appear to have always shown great respect for their dead; and the most remarkable remains of them commonly observed by Europeans at the sea-coast, are their burying places. These are at particular chosen spots; and it is well known that they have been in the habit

of bringing their dead from a distance to them. With their women they bury only their clothes.

"On the north side of the lake opposite the River Exploits, are the extremities of two deer fences, about half a mile apart, where they lead to the water. It is understood that they diverge many miles in a north-westerly direction. The Red Indians make these fences, to lead and scare the deer to the lake, during the periodical migration of these animals. The Indians being stationed looking out when the deer get into the water to swim across, the lake being narrow at this end, they attack and kill the animals with spears out of their canoes. In this way they secure their winter provisions before the severity of that season sets in.

"There were other old remains, of different kinds, peculiar to these people, met with about the lake. One night we encamped on the foundation of an old Red Indian wigwam, on the extremity of a point of land which juts out into the lake, and exposed to the view of the whole country round. A large fire at night is the life and soul of such a party as ours, and when it blazed up at times, I could not help observing that two of my Indians evinced uneasiness and want of confidence in things around, as if they thought themselves usurpers on the Red Indian territory. From time immemorial none of the Indians of the other tribes had ever encamped near this lake fearlessly, and, as we had now done, in the very centre of such a country, the lake and territory adjacent having been always considered to belong exclu-

sively to the Red Indians, and to have been occupied by them. It had been our invariable practice hitherto to encamp near the hills, and be on their summits by the dawn of day, to try to discover the morning smoke ascending from the Red Indians' camps; and to prevent the discovery of ourselves we extinguished our own fire always some length of time before daylight.

"Our only and frail hope now left of seeing the Red Indians, lay on the banks of the River Exploits, on our return to the sea-coast.

"The Red Indians' Lake discharges itself about three or four miles from its north-east end, and its waters form the River Exploits. From the lake to the sea-coast is considered about seventy miles; and down this noble river the steady perseverance and intrepidity of my Indians carried me on rafts in four days, to accomplish which otherwise would have required, probably, two weeks. We landed at various places on both banks of the river on our way down, but found no traces of the Red Indians so recent as those seen at the portage at Badger Bay, Great Lake, towards the beginning of our excursion. During our descent we had to construct new rafts. What arrests the attention most while gliding down the stream, is the extent of the Indian fences to entrap the deer. They extend from the lake downwards continuous, on the banks of the river, at least thirty miles. There are openings left here and there in them, for the animals to go through and swim across the river, and at these places the Indians are stationed, and kill them in

the water with spears, out of their canoes, as at the lake. Here, then, connecting these fences with those on the north-west side of the lake, is at least forty miles of country, easterly and westerly, prepared to intercept all the deer that pass that way in their periodical migrations. It was melancholy to contemplate the gigantic, yet feeble efforts of a whole primitive nation, in their anxiety to provide subsistence, forsaken and going to decay.

There must have been hundreds of the Red Indians, and that not many years ago, to have kept up these fences and pounds. As their numbers were lessened, so was their ability to keep them up for the purposes intended; and now the deer pass the whole line unmolested.

"We infer, that the few of these people who yet survive have taken refuge in some sequestered spot, still in the northern part of the island, and where they can procure deer to subsist on. On the 29th of November we had again returned to the mouth of the River Exploits, in thirty days after our departure from thence, after having made a complete circuit of about 200 miles in the Red Indian territory.

"In conclusion, I congratulate the institution on the acquisition of several ingenious articles, the manufacture of the Boeothicks or Red Indians, some of which we had the good fortune to discover on our recent excursion; models of their canoes, bows and arrows, spears of different kinds, &c., and also a complete dress worn by that people. Their mode of kindling fire is not only

original, but as far as we at present know, is peculiar to the tribe. These articles, together with a short vocabulary of their language, consisting of 200 or 300 words which I have been enabled to collect, prove the Boeothicks to be a distinct tribe from any hitherto discovered in North America. One remarkable characteristic of their language, and in which it resembles those of Europe more than any other Indian languages do, with which we have had an opportunity of comparing it, is its abounding in diphthongs."

